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THE ATTITUDES TOWARDS PHYSICAL ACTIVITY AND GAME PREFERENCE
OF A SELECTED GROUP OF FRENCH AND ENGLISH
CANADIAN SECONDARY SCHOOL STUDENTS

by



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A THESIS

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The undersigned certify that they have read and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Attitudes Towards Physical Activity and Game Preference of a Selected Group of French and English Canadian Secondary School Students," submitted by Peter Kenneth Jensen in partial fulfilment of the requirements for the degree of Master of Arts.

Date *August 3, 1971* . . .

ABSTRACT

The purpose of this study was to determine current interests in and attitudes towards physical activity as well as the game preference of French and English secondary school students.

For the main comparisons, 776 students were selected at random by classes from grades ten and twelve in French schools in northwestern Quebec and English schools in Kirkland Lake, Ontario, Canada. This total comprised of 395 females and 371 males. A separate sample of 217 grade eleven males and females were selected for the purposes of urban-rural comparisons. All subjects responded to a general information inventory, an attitude towards physical activity inventory (developed by Kenyon), and a game preference inventory.

The data was subjected to a chi square analysis to test for significant differences in expressed attitudes, game preferences, and participation between sexes, cultures or between sexes within each culture. The four sub-populations expressed favourable attitudes towards physical activity as a social experience, aesthetic experience, as a means for catharsis, and for health and fitness. A negative attitude was expressed towards physical activity as games of chance by all groups while a slightly positive attitude was expressed towards physical activity as the pursuit of vertigo and as an ascetic experience.

Despite the fact that both French and English females expressed an extremely favourable attitude towards physical activity as an aesthetic experience, less than 45.0 percent indicated they participated in physical activities of this nature at least once per week. All groups indicated they participated in health and fitness activities most frequently.

A greater preference for games of physical skill was indicated by all sub-groups over games of strategy and games of chance. There was insufficient evidence to indicate any cultural differences in game preference.

The main conclusions arising from the results were:

1. Attitude towards physical activity was generally favourable.
2. Expression of the desire to participate in a greater variety of activities was evident.
3. The attitude subdomains as developed by Kenyon are valid with the exception of chance which should be re-examined and ascetic which should include a more obvious indication of the competitive element.
4. Females are extremely interested in the aesthetic subdomain of physical activity.
5. French and English differences are not as great as those between sexes within each culture.
6. The game preference inventory lacks explanatory value without the addition of a value orientation questionnaire.

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The author dedicates this thesis to his parents, Audrey and Anker Jensen, who made it all possible.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
The Problem	4
Need for the Study	4
Limitations	4
Delimitations	5
Definition of Terms	5
Hypotheses	7
II. REVIEW OF THE LITERATURE	8
Review of Studies Concerning Attitudes Towards	
Physical Activity	8
Review of Studies Concerning Game Preference . . .	17
Review of Literature Concerning the French	
Canadian Life Style	25
French Canadian Involvement in International	
Games	30
III. METHODS AND PROCEDURES	32
Sample Size and Location	32
Time and Duration of Study	33
Test Instruments Used	34
Test Methods and Procedures	34
Data Processing	35
Development of a Game Preference Measurement	
Instrument	37

CHAPTER	PAGE
IV. RESULTS AND DISCUSSION	39
Attitude Towards and Participation in	
Physical Activity	39
General Information	71
Game Preference	93
V. SUMMARY AND CONCLUSIONS	99
Summary	99
Conclusions	109
Recommendations	110
Recommendations for Physical Education Programs .	111
BIBLIOGRAPHY	112
APPENDICES	118

LIST OF TABLES

TABLE		PAGE
I.	Attitude Towards Physical Activity as a Social Experience	41
II.	Attitude Towards Physical Activity for Health and Fitness	42
III.	Attitude Towards Physical Activity as the Pursuit of Vertigo	44
IV.	Attitude Towards Physical Activity as an Aesthetic Experience	45
V.	Attitude Towards Physical Activity for Catharsis	47
VI.	Attitude Towards Physical Activity as an Ascetic Experience	48
VII.	Attitude Towards Physical Activity as Games of Chance	49
VIII.	Participation in Physical Activity as a Social Experience	51
IX.	Participation in Physical Activity for Health and Fitness	53
X.	Participation in Physical Activity as the Pursuit of Vertigo	54
XI.	Participation in Physical Activity as an Aesthetic Experience	56
XII.	Participation in Physical Activity for Catharsis	57

TABLE	PAGE
XIII. Participation in Physical Activity as an Ascetic	
Experience	59
XIV. Participation in Physical Activity as Games of	
Chance	60
XV. Ranking of Attitude Means	61
XVI. Ranking of Seven Subdomains by Participation	62
XVII. Attitude Versus Participation: French Females	67
XVIII. Attitude Versus Participation: French Males	68
XIX. Attitude Versus Participation: English Females	69
XX. Attitude Versus Participation: English Males	70
XXI. Interest in Theoretical Matters	72
XXII. Interest in That Which is Practical and Useful	72
XXIII. Interest in That Which is Beautiful	74
XXIV. Interest in That Which Involves Other People	74
XXV. Interest in Politics	76
XXVI. Interest in Religious Matters	76
XXVII. Participation in Physical Activity as a Social	
Experience: Best Friend Versus Self	79
XXVIII. Participation in Physical Activity for Health	
and Fitness: Best Friend Versus Self	80
XXIX. Participation in Physical Activity as the Pursuit	
of Vertigo: Best Friend Versus Self	82
XXX. Participation in Physical Activity as an Aesthetic	
Experience: Best Friend Versus Self	83
XXXI. Participation in Physical Activity for Catharsis:	
Best Friend Versus Self	84

TABLE	PAGE
XXXII. Participation in Physical Activity as an Ascetic Experience: Best Friend Versus Self	85
XXXIII. Participation in Physical Activity as Games of Chance: Best Friend Versus Self	86
XXXIV. Frequency of Viewing Teen Dance Programs on Television	88
XXXV. Frequency of Viewing Health and Fitness Programs on Television	88
XXXVI. Frequency of Viewing Vertigo Activities on Television	90
XXXVII. Frequency of Viewing Aesthetic Activities on Television	90
XXXVIII. Frequency of Viewing College and Professional Sports on Television	91
XXXIX. Frequency of Reading About Sports and Physical Activity in the Newspaper	92
XL. Frequency of Reading About Sports and Physical Activity in Magazines and Books	92
XLI. Game Preference: Games of Physical Skill	96
XLII. Game Preference: Games of Strategy	97
XLIII. Game Preference: Games of Chance	98

CHAPTER I

INTRODUCTION

Games, as a social phenomenon, are present in all societies both modern and primitive. In recent years the place of games in society has been the theme of much research. Many studies have and are focused upon such questions as: What determines cultural game preferences? Is there such a thing as an inherent desire to participate in certain types of activities? What kinds of attitudes are held by different cultural groups relative to physical activity? Are they developed through individual "felt needs" or are they socialized into the individual and found reproduced in most members of a distinctive culture? Are games art forms? Do games serve a vital, as yet unrealized, function in society? What are their roles in the mental and social development and stability of the individual?

Truly much planned and well co-ordinated research is needed to examine these as yet unanswered or partially answered questions. Among the more promising social psychological units of analysis has been that of attitude. Kenyon, while at the University of Wisconsin, developed a questionnaire based partly upon theory and partly upon reasons for involvement in physical activity. The more recent attitude towards physical activity inventories are based upon a multidimensional model with seven subdomains (Kenyon, 1968).

1. Physical Activity as a Social Experience
2. Physical Activity for Health and Fitness
3. Physical Activity as the Pursuit of Vertigo
4. Physical Activity as an Aesthetic Experience

5. Physical Activity as Catharsis
6. Physical Activity as an Ascetic Experience
7. Physical Activity as Games of Chance

Several researchers (Semotiuk, 1967; Collins, 1967; Kenyon, 1968) have utilized these tools to examine attitudes towards physical activity held by secondary school students in English Canada, Great Britain, Australia, and the United States. It is of importance to note that there are two distinct cultures existant in Canada and as yet little has been done to compare and contrast the attitudes held by the Francophone and Anglophone segments of the Canadian society relative to physical activity and game preference.

Kenyon's seven subdomains along with a general information inventory could be used to determine existing attitudes towards and participation in physical activity of secondary school students from the French and English Canadian sub-cultures.

The second part of the study would involve the determination of the game preference of students from each sub-culture. Roberts and Sutton-Smith (1967) have put forth a conflict enculturation hypothesis which suggests that the motivation for playing games is the presence in the player of anxieties and conflicts induced by child training processes. The game is enjoyable because it symbolically presents these conflicts to the player and provides a lab-like situation in which the individual can learn to deal with these conflicts. This learning eventually is transferred to the real world and the original points of anxiety.

This theory suggests that certain types of games will be preferred by individuals from certain child training backgrounds. Games of chance are associated with high routine responsibility training, punishment for

the display of initiative and high religious orientation. Games of physical skill, on the other hand, are associated with high achievement orientation. Games of strategy are found only in complex cultures and are associated with severe primary socialization, psychological discipline and high obedience training (Roberts and Sutton-Smith, 1967).

It is conceivable, bearing in mind the researches of Sutton-Smith and Roberts, that the French and English Canadian students might hold different attitudes toward physical activities and might have significantly different game preferences. Game preference, according to the conflict enculturation hypothesis, would seem to be strongly linked to culture. Of key importance is the question as to whether the culture differences in Canada are acute enough to be reflected in an analysis of attitudes toward physical activity and game preferences.

Cultural change can occur from within as well as through some external force. The Quebec French culture evolved, through natural increase, from some 10,000 to a population of over 3,000,000 in two hundred years. Change was slow and occurred mainly from internal pressure. With the coming of heavy English industry and large cities, an external force began to rapidly change the French culture despite opposition from the powerful French Roman Catholic Church. In recent years the whole education system has been revamped and geared to the modern industrial society. Change has come quickly in the last twenty years.

It would be interesting to note whether English influence has drastically affected attitudes towards physical activity and game preference of the Francophone students of Quebec.

The Problem

The purpose of the study was to determine current attitudes towards and participation in physical activity as well as the game preferences of selected English and French Canadian students. A subsidiary aspect of the study was to examine cultural background and game preference.

Need for the Study

The primary need for this study is to assess present attitudes towards and interests in physical activity of the two cultural samples. These results will provide schools with information regarding existing attitudes and interests of their students as well as information to support the possible redirection of physical education programs.

The game preference information, it is hoped, will not only determine cultural preferences but also test the conflict enculturation hypothesis of Roberts and Sutton-Smith (1967).

A third need for the study is the comparison of cultural differences in attitudes towards the various subdomains of physical activity. Are the differences between attitudes held by French Canadians and English Canadians greater than differences within each culture (that is, male versus female)?

Limitations

This study was limited in that the following assumptions were made:

1. The instruments used were valid for the samples tested.
2. The attitudes expressed were those held by the subjects and not a reflection of extraneous influences.
3. External influences (that is, media) were of equal magnitude in both sub-cultures.

4. The interpretation of questions is similar for members of both cultures and is not overly biased by differences in cultural socialization processes.

Delimitations

This study is delimited:

1. To a random sample of grade ten, eleven and twelve students attending French schools in Rouyn-Noranda and Notre Dame de Grace, Quebec, and to a random sample of grade ten and twelve students attending English schools in Kirkland Lake, Ontario.
2. In that the testing was conducted over a one month period.

Definition of Terms

French Canadian School Population. All students enrolled in secondary school, where French is the primary language of instruction, in the Province of Quebec.

French Sample. A selected group of grade ten and twelve, male and female, students from the French Canadian population in Rouyn-Noranda, Quebec.

Rural Sample. A selected group of grade eleven males and females from the French Canadian secondary school in Notre Dame de Grace, Quebec.

Urban Sample. A selected group of grade eleven males and females from the French secondary school population in Rouyn, Quebec.

English Canadian School Population. All students enrolled in secondary schools in the Province of Ontario.

English Sample. A selected group of grade ten and twelve, male and female, English Canadian students attending secondary school in Kirkland Lake, Ontario.

Games of Physical Skill. Those games in which the outcomes are determined by the player's motor activities (Sutton-Smith and Roberts, 1967, p. 1).

Games of Strategy. Those games in which the outcome is determined by rational choices among possible courses of action (Sutton-Smith and Roberts, 1967, p. 1).

Games of Chance. Those games in which the outcome is determined by a guess or some external artifact such as a die or wheel (Sutton-Smith and Roberts, 1967, p. 1).

Attitude. A latent, relatively stable variable reflecting both intensity and direction of feeling toward a particular object, whether it be concrete or abstract (Kenyon, 1968b, p. 567).

Physical Activity. Organized gross human movement as manifested in active games, calisthenics, sports and dance (Kenyon, 1968a, p. 97).

Interest. A relatively persistent aspect of one's life style, usually providing a degree of pleasure or satisfaction. For this study, interest in physical activity will be reflected through participation in, and association with, sport and physical activity (Semotiuk, 1967, p. 7).

Physical Activity as a Social Experience. Those physical activities whose primary purpose is to provide a medium for social intercourse, that is, to meet new people and to perpetuate existing relationships (Kenyon, 1968a, p. 99).

Physical Activity for Health and Fitness. Those physical activities which are characterized primarily by their contribution to the improvement of one's health and fitness (Kenyon, 1968a, p. 99).

Physical Activity as a Pursuit of Vertigo. Those physical experiences which provide, at some risk to the participant, an element of thrill

through the medium of speed, acceleration, sudden change of direction, or exposure to dangerous situations, with the participant usually remaining in control (Kenyon, 1968a, p. 100).

Physical Activity as an Aesthetic Experience. Those physical activities which are often perceived as having an aesthetic value for the individual, that is, activities that are conceived of as possessing beauty or certain artistic qualities (Kenyon, 1968a, p. 100).

Physical Activity as Catharsis. Those activities which provide a release of tension precipitated by frustration through some vicarious means (Kenyon, 1968a, p. 100).

Physical Activity as an Ascetic Experience. Those physical activities that are conceived of as requiring long, strenuous and often painful training and stiff competition, demanding a deferment of many gratifications (Kenyon, 1968a, p. 101).

Hypotheses

Because games of physical skill are associated with high achievement training they will be preferred by boys as compared with girls and by those from a cultural background emphasizing high achievement as compared to those from a culture not emphasizing high achievement.

Because games of chance are associated with high routine responsibility training, punishment for the display of initiative, and a high religious orientation, they will be preferred by those from a culture which emphasizes these traits in child rearing over a culture that does not, and they will be preferred by girls as compared with boys.

Because games of strategy are associated with high obedience training they will be preferred by girls over boys.

CHAPTER II

REVIEW OF THE LITERATURE

In reviewing the literature the following observations are pertinent:

1. Most studies deal with selected populations, that is, male or female college students.
2. Most studies are conducted at the college level, that is, college sample.
3. Very little research has been conducted involving:
 - (a) high school situation
 - (b) a combined sample of male and female subjects.
4. No studies deal with two sub-cultures.

Most of the studies concerning the subject of attitude towards physical activity suffer from one, two, or all of the following shortcomings:

1. The instruments used were questionable.
2. A failure to account for the multidimensionality of the domain in question.
3. A narrow or somewhat restricted domain such as "physical education" or "sports" rather than "physical activity" in its broadest sense, has limited former studies.

Review of Studies Concerning Attitude Towards Physical Activity

This review will deal solely with those studies which employed the Kenyon questionnaire. Other studies by Scott (1960); Graybeal (1936); Bullock and Alden (1933); Wiedemann and Howe (1937); Moore (1941);

Plummer (1952); Bell and Walters (1953); Broer, Fox and Way (1955); Hunter (1956); Merrit (1961); Smith (1933); Nelson (1948); Butler (1947); Wear (1951); George (1958); Cosoday (1959); Sluiter (1959); Keogh (1964); and Squire (1956) are reviewed by Semotiuk (1967) and will not be reviewed here.

In order to overcome the shortcomings cited earlier, Kenyon undertook a project to construct a model characterizing physical activity as a sociopsychological phenomenon (Kenyon, 1963-1968). The first step was to reduce the domain of physical activity to several independent or quasi-independent subdomains.

. . . The first step was to formulate structural models, the components of which were to represent various hypothesized instrumental values of physical activity, manifest or latent. Such multidimensional models would be tested empirically by acquiring responses to verbal stimuli thought to represent each of the dimensions. If subdomains were independent of each other, responses should correlate within dimensions (internal consistency) but not between.

(Kenyon, 1968a, p. 97)

The most recent inventory is based upon a multidimensional model with seven subdomains. En route to this most recent model three hypothetical models were postulated. The first consisted of six subdomains. These were: physical health, mind-body dichotomy, cooperation-competition, mental health, social intercourse, and patriotism.

. . . Statements thought to represent each of the subdomains were incorporated in an inventory which was administered to a randomly selected sample of 756 adults and to a convenient group of approximately 100 college students. Intercorrelations and factor analysis of each set of data provided little evidence of a meaningful structure. Reflection upon this failure suggested several explanations for this result, including the use of too few stimuli, the possibility that subdomains were in themselves multidimensional, or the possibility that the deduced subdomains were not all on the same level of discourse.

(Kenyon, 1968a, p. 98)

The second structure, which also contained six subdomains, was formulated based upon further reflection upon the instrumental value of physical activity and upon an analysis of the results of the first attempt. This model proved to be much more successful. Only two of the six subdomains were unsatisfactory as they accounted for little of the common factor variance. Seventy-three Likert-type attitude statements were incorporated into an inventory and administered to 176 college men and women. The subdomains of social experience, health and fitness, the pursuit of vertigo, and as an aesthetic experience proved valid. The subdomains of recreational experience and competitive experience were replaced with catharsis and ascetic experience for the third attempt.

The subdomains of the third model will be discussed in some detail as they formulated the present inventory with the addition of the seventh subdomain of chance.

Physical Activity as a Social Experience. Claims that individuals meet certain social needs through participation in physical activity have long been made by professionals and laymen alike.

Thus, physical activity as a social experience was characterized by those physical activities whose primary purpose is to provide a medium for social intercourse, that is, to meet new people and to perpetuate existing relationships.

(Kenyon, 1968a, p. 99)

Almost all physical activity can serve such a purpose: curling, bowling, golf, tennis, and dancing are but a few examples.

Physical Activity For Health and Fitness. This subdomain needs little explanation. Most people, whether or not they themselves are active, believe that physical activity can enhance an individual's health and fitness. Certainly the new trend towards spas and health clubs, the statements of medical practitioners, and the national bodies on health

and fitness would tend to back this statement. "Therefore it was posited that some physical activity can be characterized primarily by its contribution to the improvement of one's health and fitness" (Kenyon, 1968a, p. 99). Some obvious examples are calisthenics, aerobics, weight training, jogging and other conditioning exercises but conceivably any activity could be fitness oriented.

Physical Activity as the Pursuit of Vertigo. Kenyon (1968a, p. 99) pointed out that the suggestion that certain physical activities can provide a medium for pursuing vertigo comes from Caillois. Games based on the pursuit of vertigo

. . . consist of an attempt to momentarily destroy the stability of perception and inflict a kind of voluptuous panic upon an otherwise lucid mind. In all cases, it is a question of surrendering to a kind of spasm, seizure, or shock which destroys reality with sovereign brusqueness. . . .

Various physical activities . . . provoke these sensations, such as the tight rope, falling as being projected into space, rapid rotations, sliding, speeding, and acceleration of vertical movement separating as in combination with gyrating movement.

. . . Men surrender to the intoxication of many kinds of dance, from the common but insidious giddiness of the waltz to many mod, tremendous and convulsive movement of dances. They derive the same kind of pleasure from the intoxication stimulated by high speed on skis, motor cycles, or in driving sport cars.

(Caillois, 1961, p. 23-25, cited in Kenyon, 1968a, p. 99-100)

The Caillois concept of games for the pursuit of vertigo has been criticized by McIntosh (1963) who stated that amusement park devices would provide this vertigo experience. McIntosh says that Caillois' category of vertigo "sub-divides within his classification of competition and chance depending on whether resourcefulness or resignation is the dominant factor" (McIntosh, cited in Kenyon, 1968a, p. 100).

Kenyon, despite such criticism, retained the subdomain as earlier tests had shown it to have considerable promise. He does, however, realize

that pursuit is the key word in defining vertigo in that the individual usually approaches vertigo without actually achieving it. Thus, such activities as skiing, sky diving, auto racing, and sailing may not be recognized as having a common vertigo element and it is possible that the instrumental value here is latent (Kenyon, 1968a, p. 100).

For the purposes of his model, Kenyon considered physical activity as the pursuit of vertigo to be

. . . those physical experiences providing, at some risk to the participant, an element of thrill through the medium of speed, acceleration, sudden change of direction, or exposure to dangerous situations, with the participant usually remaining in control.

(Kenyon, 1968a, p. 100)

Physical Activity as an Aesthetic Experience. The validity of this subdomain is not in question in that it has long been recognized that many people consider beautiful skilled movement in such activities as ballet, figure skating, gymnastics and diving. Physical activity is often perceived of as having "aesthetic value for the individual--that is activities one conceived of as possessing beauty or certain artistic qualities" (Kenyon, 1968a, p. 100).

Physical Activity as Catharsis. The belief that physical activity can provide a release from frustration and pent-up emotions caused by the pressure of modern living, has been expressed by many. The important point here is not whether physical activity can perform a cathartic function but rather that it is "perceived" as having this value. Kenyon defined this subdomain ". . . as [a mechanism for] providing a release of tension precipitated by frustration through some vicarious means" (Kenyon, 1968a, p. 100). Almost any activity could be perceived as having this function.

:

Physical Activity as an Ascetic Experience. This subdomain arose due to the failure of competition as a subdomain. It was reasoned that if sports provide a medium for expression of superiority then the individual would recognize the need for prolonged and strenuous training periods before gratification could occur (Kenyon, 1968a, p. 101). The ascetic experience considered here is seen as punishment of the body (seldom inflicting damage) by painful training and stiff competition. Such activities as football, hockey, long-distance running, and swimming could fall into this subdomain.

In recent years a seventh subdomain, that of physical activity expressed in games of chance, has been added. Kenyon defined these games as those ". . . where chance and luck are more important than skill in determining the winner" (Kenyon, 1968a, p. 8). Games such as dice, horse racing and bingo fall into this subdomain.

Semotiuk, using the Kenyon questionnaire, conducted a study of the attitude towards physical activity as held by a sample of 995 grade ten and twelve Canadian secondary school students from Edmonton, Alberta. He concluded:

1. Attitude towards physical activity was generally favourable.
2. Interest in physical activity was influenced by effect of communication media, although the exposure to sport was limited.
3. The instrument in the inventory is shown to have moderately high reliability.
4. Students express a desire to participate in a greater variety of physical activities.
5. Participation in different types of physical activity is influenced by best friends.

6. Boys show more interest in physical activity than girls do. This was clearly shown by television viewing, newspaper reading, and attendance at spectator sports (Semotiuk, 1967, p. 164).

Collins (1967), using the Kenyon questionnaire, conducted a study of attitudes held towards physical activity by secondary school students in Western Australia. All four sub-populations (grade nine girls, grade nine boys, grade eleven girls, and grade eleven boys) indicated a favourable attitude towards physical activity as a social experience, as catharsis, as the pursuit of vertigo and for health and fitness.

Collins found a significant difference in attitudes held by students from high economic backgrounds and those held by students from low economic backgrounds. He also suggested that perhaps the subdomains should be re-examined, in particular chance.

Kenyon (1968c) employed the results obtained from studies which had utilized his questionnaire, notably those of Semotiuk (Canada); Collins (Australia); Oliver, McCarthy and Keogh (England) and his own research (United States) to determine:

1. Attitudes towards physical activity among urban secondary school students as a function of country, sex, and level of educational attainment.
2. The nature and degree of involvement in physical activity among urban secondary school students as a function of country, sex and level of educational attainment.
3. The significance of certain behavioural, dispositional and situational variables in explaining attitude towards physical activity.
4. The significance of certain behavioural, dispositional and situational variables in explaining involvement in physical activity (Kenyon, 1968c, p. 4).

As a result of the analysis, Kenyon made the following generalizations:

Social Experience. None of the national differences were significant. Sex difference was significant with females showing a more positive attitude towards physical activity as a social experience than males.

Health and Fitness. All countries reported a positive attitude with the Australians slightly lower. Females displayed a significantly more positive attitude than males. Upper level students in Canada and the United States showed a significantly more positive attitude than lower level students. The reversal held true in Great Britain and Australia.

Vertigo. All countries showed a significantly more positive attitude for males over females, upper level males over lower level males and lower level females over upper level females. The significant difference among countries can be attributed to the means for Canadian and English samples being somewhat higher than those for either the United States or Australia samples with Australians significantly lower than the Americans.

Aesthetic Experience. A significant difference in all three main effects of country, level, and sex. For all countries mean attitude scores were positive and high for upper level and much higher for females than males. Canadian and English students expressed a more positive attitude than American and Australian samples.

Catharsis. All four countries expressed a positive attitude with Canadian and English students' attitudes significantly greater than Australian and American students. A more positive attitude was expressed by females over males and upper level students over lower level students.

Ascetic. All countries were around the neutral point with Canada highest and Australians the lowest. There was, however, a significant difference between countries as well as for males over females.

Chance. All groups were around or somewhat below the neutral point. Lower level students displayed a significantly more positive attitude over upper level students. Males expressed a slightly more positive attitude towards physical activity perceived as chance than females.

To summarize, Kenyon (1968) in searching for a conceptual framework for characterizing values held for physical activity found no single psychological or sociological theory emerged as an appropriate model. He developed a new structure based upon frequently alleged reasons for being interested in physical activities. The most recent inventories are based upon a multidimensional model with seven subdomains;

1. Physical Activity as a Social Experience,
2. Physical Activity for Health and Fitness,
3. Physical Activity as the Pursuit of Vertigo,
4. Physical Activity as an Aesthetic Experience,
5. Physical Activity as Catharsis,
6. Physical Activity as an Ascetic Experience,
7. Physical Activity as Games of Chance.

Kenyon, along with Semotiuk, Collins, and others, have used this instrument and found it valid. The subdomain of chance is under some question.

Review of Studies Concerning Game Preference

The basic premise of sociology, as suggested by Matt (cited in Loy, 1966, p.1), holds that "the behavior of human beings is influenced by the structure and composition of the social organization in which they live." Games, as models, play a vital role in social structure. The nature of the social structure determines the nature of and the purpose of games in that culture.

The classification of games, and theory as to the purpose of these games in social structures, have been put forth by several researchers. Loy (1966) merged Caillois' (1961) and Merton's (1957) paradigms into one such explanation. Caillois, a French sociologist, classified games under the heading of *agon*, *alea*, *mimicry*, and *ilinx*. Loy translated these into the categories of competition, chance, simulation, and vertigo. Games of competition are those which require strenuous training, discipline and total effort and possess little or no element of chance.

Games of chance are:

. . . all games that are based on a decision independent of the players, an outcome over which he has no control, and in which winning is the result of fate rather than triumphing over an adversary. More properly, destiny is the sole artisan of victory, and where there is rivalry, what is meant is that the winner has been more favoured by fortune than the loser. The player is entirely passive; he does not deploy his resources, skill, muscles or intelligence.

(Caillois, 1961, p. 17)

In games of simulation ". . . the subject makes believe that he is someone other than himself. He forgets, disguises, or temporarily sheds his personality in order to feign another" (Caillois, 1961, p. 19).

Games of vertigo ". . . consist of an attempt to momentarily destroy the stability of perception and inflict a kind of voluptuous panic upon an otherwise lucid mind" (Caillois, 1961, p. 23).

Caillois considered competition-chance, competition-simulation, vertigo-simulation, and vertigo-chance to be four sub-classifications. He contended that each category of games was on a continuum going from paidia to ludus.

Paidia represents the non-regulated informal forms of a given classification of games, while ludus represents the rule bound, formal institutionalized aspects of a specific game category. For example, in games of competition, informal races among children are at one end of the continuum and formal contests such as national track and field championships are at the other.

(Loy, 1966, p. 3)

The fundamental game categories are reflected, according to Caillois, in institutionalized forms in everyday life. He also put forth the suggestion that cultures may be characterized by a dominant game form.

Inasmuch as I am . . . convinced that there exists precise interrelationships of compensation or connivance in games, customs and institutions, it does not seem to me unreasonable to find out whether the very destiny of cultures, their chance to flourish or stagnate, is not equally determined by their preference for one or another of the basic categories into which I have tried to divide games, categories that are not equally creative.

(Caillois, 1961, p. 67)

Loy discussed Merton's paradigm

. . . among the many elements of social and cultural structures, two are of primary importance. 'The first consists of culturally defined goals, purposes, and interests, held out as legitimate objects for all or for diversely located members of the society' (Merton, 1957, p. 132). The second element consists of the acceptable ways of obtaining such goals (Merton, 1957, p. 133). It is observed that some individuals, because of their position in the social structure, are not functionally able to fully assimilate either cultural goals, or institutionalized means for reaching these goals, or both.

(Loy, 1966, p. 5)

Concerning the two basic elements of social and cultural structure Merton suggested five modes of individual adaptation: conformity, innovation, ritualism, retreatism and rebellion. Retreatism and rebellion are

deviant or socially unacceptable forms of adaption and as such would not have games of any form associated with them.

Loy (1966) then merged the paradigms of Caillois and Merton on the premise that there exists relationships between specific game categories and selected modes of adaption to culture goals and institutionalized means by individuals in different segments of society.

Conformity, as an adaption, is found primarily among members of the upper strata and innovation amongst persons in the lower strata of society. It must be pointed out that a person displaying innovation as a means of adaption ascribes to the cultural goals but not the means preferred for reaching these goals. Loy suggested that games of competition are associated with persons displaying the conformity adaption and games of chance are associated with individuals displaying the innovation adaption. Caillois earlier had stated that ". . . recourse to chance helps people tolerate competition that is unfair or too rugged (Caillois, 1961, p. 115). Sutton-Smith and Roberts (1966), working independently, found that games of chance were, in fact, associated with lower strata and games of physical skill with the upper strata.

Loy proposed that ritualism was associated with lower-middle class and spectator sports of a competitive nature. He suggests that these people have a "vicarious success" syndrome and by identifying with a successful sports star or team they experience the success they themselves cannot obtain.

Much of the research in the area of game preference has been done by Roberts and Sutton-Smith. They, along with others, have shown that when games of the three major categories (chance, physical skill, and strategy) are examined cross-culturally they are highly related to specific

variables in the culture and the nature of child training. They suggest a conflict enculturation hypothesis which states that conflicts induced by social learning in childhood and later (such as those related to obedience, achievement, and responsibility) lead to involvement in expressive modes such as games (1963).

Their theory as to game classification and the conflict enculturation theory is outlined in many papers.

Sutton-Smith and Roberts (1967) presented a paper, "The Cross-Cultural and Psychological Study of Games," which best summarizes a series of researches which began with a study by Roberts, Arth, and Bush (1959). In this initial study, games were defined as competitive activities which always terminate in an outcome; namely winning, drawing, or losing (Roberts, Arth, and Bush, 1959, p. 598).

Games were classified into three categories:

1. Games of physical skill in which the outcomes are determined by the player's motor activities.
2. Games of chance in which the outcome is determined by a guess or some external artifact such as a die or wheel.
3. Games of strategy in which the outcome is determined by rational choices (Sutton-Smith and Roberts, 1967, p. 1).

Pure games of physical skill include weightlifting, sprints and darts. Pure games of chance are those such as bingo, dice and most card games. Checkers and chess as well as tic-tack-toe are pure games of strategy. Most games are combinations of two categories. Football and ice hockey involve physical skill and strategy. Poker and bridge involve chance and strategy.

From a cross-cultural analysis based on the Human Relations Area Files it was found that games of physical skill has the widest distribution followed by games of chance and then games of strategy. The sample of cultures which lack physical activities defined by Sutton-Smith and Roberts as games is small and under some question.

Cultures which possess games of physical skill alone were found in the tropical regions. They are typified by small communities with simple subsistence, economics, and technologies. Class stratification is absent, the judicial system undeveloped, and the level of political integration low. Child socialization is easy and anxieties and conflicts low. Such cultures give the general impression of simplicity.

Cultures with games of chance also possess games of physical skill. In addition some also possess games of strategy. Generally cultures with games of chance display a wide range of cultural complexity varying from quite simple cultures to the most complex. Sutton-Smith and Roberts (1967) hold the belief that since cultural complexity is known to be associated with games of strategy, it is reasonable to assume that chance playing began in simple settings. Games of chance appear to flourish in the presence of environmental, individual, and social uncertainty regardless of the relative complexity of the cultures in which they occur.

In cultures which are relatively simple (no games of strategy) games of chance seem to be a way of making up one's mind with the help of a benevolent Fate. Such cultures are found in the higher latitudes and have no reliable source of subsistence. They rely on hunting and fishing and thus their settlements are non-fixed.

As has been stated earlier, games of strategy are associated with high culture complexity. These are found in cultures with large settle-

ments, complicated subsistence patterns, higher technology, higher level of political integration, jurisdiction, social stratification and occupational specialization (Sutton-Smith and Roberts, 1967, p. 6).

Cultures possessing games of all three categories are the most complex of all. All modern industrial societies fall into this group. "They appear to be an amalgam of the general physical skill tradition with an overlay of chance and then very importantly an overlay of strategy" (Sutton-Smith and Roberts, 1967, p. 7).

Perhaps the biggest single contribution made by Roberts and Sutton-Smith, as a result of their findings, has been the conflict enculturation hypothesis.

These then are a sample of the findings from a number of studies. They challenge the traditional view that games are of no functional significance. Furthermore, they suggest that at least on the empirical level, there is evidence in favor of both classic psychogenic (Freudian) and sociogenic (Groos) theories of play. Games appear to require a theoretical structure which will account both for their relationship to child-training antecedents and to their cultural outcomes. What the nature of such a theory might be has been suggested in our conflict-enculturation theory of games.

(Sutton-Smith and Roberts, 1967, p. 7)

The conflict enculturation theory is outlined in most articles by Sutton-Smith, Roberts and others.

This theory says that the individual and psychological motivation for game playing is the presence in the player of anxieties and conflicts induced by antecedent child-training processes. The game is enjoyable to the player because it consists in a symbolic statement of these conflicts, and because in the course of the buffered learning which the game provides, the player develops confidence and competence to handle the real life situations towards which the original anxieties point.

(Sutton-Smith and Roberts, 1967, p. 12)

Our work on the enculturative end of this theory had led us to the formulation that games are, among other things, models of power. Games are, we suggest, models of ways of succeeding over others, by magical power (as in games of chance), by force (as in games of physical skill), or by cleverness (as in games of strategy). We have speculated that in games children learn all those necessary arts of trickery, deception, harassment, divination, and foul play that their teachers won't teach them, but that are most important in successful human interrelationships in marriage, business, and war. Further that boys played games of physical skill because this is the power form that they can most easily command; and that girls showed a preference for games of strategy and chance because these are the lesser power forms available to them.

(Sutton-Smith and Roberts, 1967, p. 14)

Roberts, Sutton-Smith, and Kozelka (1963) made use of three survey polls: the American Institute of Public Opinion (Gallup) Poll of 1940, which consisted of 3,242 subjects; the 1948 Minnesota Poll No. 53, which consisted of 598 respondents; and the Roper-Fortune Survey No. 73, which consisted of 3,008 subjects. They tested the following predictions for adult game preferences in the United States:

1. Because games of strategy are associated cross-culturally with severe primary socialization, psychological discipline, high obedience training and complex cultures, they will be preferred in this culture by the persons who have had greater experience of such a child training pattern, that is, the higher status groups as compared with the lower, and women as compared with men.
2. Because games of chance are associated cross-culturally with high routine responsibility training, punishment for the display of initiative, and a belief in the benevolence of the gods, they will be preferred in this culture by members of the lower status groups as compared with the higher and by women as compared with men.
3. Because games of physical skill are associated cross-culturally with high achievement training, they will be preferred in this culture by

the upper as compared with the lower status groups and by men as compared with women (Sutton-Smith, et al., 1963, p. 16).

They concluded that the major predictions were confirmed. For games of physical skill all differences were significant at the 0.01 level of significance. For games of strategy the differences between professionals and some of the intermediate groups such as clerks was reduced but the professionals showed a significantly greater (significant at the 0.05 level of significance) preference for such games than the "worker" groups such as servants, skilled, unskilled and semi-skilled. Most of the worker categories in which responsibility and routine occupations were predominant showed a greater interest in games of chance. The semi-skilled worker group showed a significantly greater (significant at the 0.01 level of significance) preference for such games.

Enculturation was considered to be comprised of two distinct processes: social learning and personality adjustment. In their discussion the authors suggested a number of propositions concerning the conflict-enculturation hypothesis.

1. Conflict induced in children or adults by achievement training arouses in them curiosity about those expressive models that contain a representation of winning and losing as a result of the application of power and skill.
2. Persons who are made curious about achievement by their conflict over it readily become involved in achievement as represented in expressive models.
3. In the case of children, and to a lesser extent adults, participation in achievement games contributes to physical, intellectual, and social

learning, each of which in due course may contribute to the participant's ability to survive in the full scale success system of the larger culture.

4. Expressive models contribute to a player's adjustment to the cultural pressures which have given rise to his conflict (child training pressures for children, current success pressures for adults), because they are exercises in mastery (Sutton-Smith, et al., 1963, pp. 24-6).

Review of Literature Concerning the French Canadian Life Style

The primary purpose of this section is to describe the French culture of Quebec, as it was, as it has evolved and as it is today. Much has been written on the French Canadians' life style, religious background, values, and family life, but the same is not true concerning the English Canadian. Ideally this review should compare and contrast English and French values, interests and family life. This is not possible.

The second alternative, the one to be taken here, is to show the evolution of French Canada and underline the external influences that may have caused this change. In the introduction to this thesis the point was raised that change, in a culture, may occur from within or from external pressures. It was hypothesised that change from without could be reflected in the attitude of the French Canadian. He may become more like his English-speaking neighbour.

One of the best researched and most well written studies on old Quebec was by Horace Miner, an American sociologist. Miner (1939) studied the village of St. Denis in the late 1930's. He pointed out that the French Canadian society was strongly familial and contended that the

culture was completely articulated with the doctrines and the practice of the church.

Redfield (1939), in an introduction to Miner's work, stated that:

The church provides sacred justifications and explanations for the necessary toil of the native, offers rituals to carry the individual from birth to death, and supports and sanctifies the large-family system. In its local institutions and in the local priest it provides the framework for community government and the moral leader of the community. And when the local ways are threatened by such a danger as the example of the summer colony, the church is there, in the sermons of the priest, to minimize the danger of contagion. The church has gradually eliminated from the magic of the people those forms which are not consistent with Catholic Christianity, while allowing the society to accept certain approved novelties, such as scientific agriculture. One might think that under this tutelage the traditional culture of the French Canadian, preserving its essentials, might continue substantially intact for many centuries.

(Redfield, as cited in Miner, 1939, pp. xvii-xviii)

The family unit was the basis of life in rural French Canada and Miner pointed out that members of both sexes and of all ages shared in the responsibilities. The parish was the unit of social life and the mass was of ultimate importance. In a chapter concerning the role of religion, Miner began by stating that:

All the inhabitants of St. Denis are Roman Catholics. The philosophy of this religion is ingrained in the people from childhood. Emulation of the socially powerful individuals in the community means the acceptance of Catholic ideology and behavior patterns. All the methods of orienting the child in the society are employed to develop in him emotional attachment to this particular set of beliefs. Lack of contact with persons of other convictions and the relative lack of functional problems in the mode of living mean that the particular native belief is rarely questioned.

(Miner, 1939, p. 91)

Catholicism was conceived by Miner as a consoling religion (1939, p. 96). The type of consolation was typified in an extract from a sermon given by a priest, "the most respected and socially powerful person

in the community" (Miner, 1939, p. 96).

Today is the celebration of St. Joseph. He is the patron of the church, of Canada and of all of us, as it is rare that a child is not baptized with the name of St. Joseph. When God chose St. Joseph, he chose a humble man. The Bible says it is difficult for the rich to reach heaven. It is very understandable. They lead a life without effort or sacrifice, a life which is soft and lazy. They are interested in bodily pleasures. After death what will become of their riches, their honors? They will be in hell to suffer eternally for the sins they committed during their lives. God chose a carpenter from among all the people from whom he could choose. You are farmers, not of the rich of the earth, starting work early and stopping late. God loves you all the more. Look at St. Joseph. He was a carpenter. Don't envy those who run the streets until eleven o'clock at night going to theatres and cafes. They live low lives. In the cities there is no happiness. Love your land, the land of your fathers and your ancestors. Cultivate it; love it; love your humble calling. Your calling has been given you by God. Continue to follow it. God will bless you when you die if you till the soil and serve him. Nothing is received from heaven without sacrifice.

(Miner, 1939, p. 96)

Miner was not alone when he wrote of the powerful role of the church for the same thoughts were reiterated by Falardeau, who, when writing of the French Canadian, stated that "he does not dominate the parish, he is dominated by it" (1964, p. 31). Similar views have been expressed by many others including Gerin (1932), Deffontaines (1953), and Redfield (1964).

From the review of Miner's study, it would appear that the French Canadian, at that time, was brought up in a culture in which a heavy emphasis was placed upon obedience training and religious orientation. Sutton-Smith and Roberts have linked these cultural traits to a preference for games of chance.

Sociologist Everett Hughes (1943) studied the effect of Anglo-American industrialization upon the French town of Cantonville. Hughes discussed the statement by Lanctot that "the French Canadian, who believes

in primacy of the spirit, despises business and esteems only the liberal profession" (1941, p. 288). "The statement is undoubtedly true," contended Hughes (1943, p. 113) but he went on to point out that each French Canadian family seemed to focus on one son as a potential professional. Business was considered below a profession and therefore this lot fell to the other sons. The school systems were not geared to the business world and thus,

. . . the boy who has means and family behind him is set in traditional grooves; the boy who starts out on his own is hopelessly handicapped by the nature of his early schooling, as well as by tradition (Hughes, 1943, p. 114).

Falardeau gave statistical evidence in support of Hughes' findings:

Among a total of 9,304 students who, between 1939 and 1950, graduated with their B.A. degree from the classical colleges in the province 3,447 or 37 per cent entered the priesthood. Of the remaining 5,857, 40 per cent chose the medical profession, 16 per cent engineering, 11 per cent law, 8 per cent commerce, and only 7 per cent 'applied sciences.'

(Falardeau, 1964, p. 114)

He also pointed out that French universities produced only three (3) percent of graduate engineers in Canada in 1949 and that in 1951 only 5.1 percent of Canadian engineers and twenty-five percent of Quebec engineers were of French Canadian extraction (Falardeau, 1953, p. 115).

Elkin (1964) drew together research on Canadian families in his book, "The Family in Canada," which was commissioned by the Canadian Conference on the Family. He pointed out that, in contrast to the English Canadian family, the French Canadian family has always been a distinct entity with a distinctive culture. The main reasons for this are essentially historical. The English-speaking population is extremely heterogeneous with various infusions from overseas and by virtue of its language and commercial relationships has never lost contact with families still resident in England, the United States, and other nations.

The French Canadian population, in contrast, has grown almost

entirely by natural increase from an original 10,000 to several million due to a halt in immigration after Wolfe's victory and the influence of the church in favouring strong familial solidarity through the ideal of high birth rate. The church was the primary integrating force through its strong religious traditions.

Elkin summed up the role of the family and indirectly the church and how it has held back the French Canadian.

The family has always been a strong and revered unit in French Canada. From a personal point of view, this has given a strong sense of security and warmth; from an economic point of view, however, this spirit has been partially responsible for holding back French Canadians in the economic and commercial world. With the family a primary concern, the directors of small family enterprises were reluctant to organize more impersonally and to take the risks necessary to expand and compete in a larger market. With the current revival in Quebec, the elite and provincial government are very much aware of this limitation and are now, in various ways, encouraging the efficient family enterprises to modify their structures and their policies.

(Elkin, 1964, p. 68)

Times have changed since the works of Miner, Hughes, and Redfield. The population has become urbanized and there is a high rate of unemployment in Quebec. The French Canadian, for the first time, is questioning the role of the church and traditional values. The birth rate, which was traditionally high in French Canada, is decreasingly reflecting a significant change in values (Elkin, 1964, p. 23).

Quebec is becoming more and more "standardized" as compared with the rest of Canada. Tremblay and Fortin (1963) have been able to produce evidence of this profound change in the traditional values of the French Canadian family. They asked a sample of 1,500 people in Quebec whether it was better to have fewer children and to give each of them an easier life and more education rather than have large families. Some seventy-eight percent replied "yes" while only sixteen percent responded

negatively (cited in Elkin, 1964, p. 82-3).

Tremblay and Fortin (1963), in another study, pointed out that only twenty-three percent of French families succeeded in saving while some seventy-four percent went into debt of one form or another. Elkin commented on this.

This change implies that the traditional habits and attitudes in Quebec that encouraged saving, the purchase of property, and cash payments, have been replaced by an emphasis on consumption and credit buying. At one time credit was condemned as immoral and harmful while saving was considered a necessity to insure the security of the family.

(Elkin, 1964, p. 82)

The situation, Elkin noted, is no different in English Canada (Elkin, 1964, p. 82). Today French Canada is in a period of transition. The school system has been completely revamped and geared to the commercial world. The whole French Canadian outlook is changing. This change is, at least in part, due to the influence of the primarily English business community of modern industrial North America.

It is very difficult to say what values the French Canadian considers important today, as the transition is just now occurring. The pendulum of change swings from one extreme to the other before it settles somewhere in between.

French Canadian Involvement in International Games

Landry, Saint-Denis and Turgeon (1966) conducted a study of the participation of French-speaking Canadians in international competition. They found that, despite the fact that greater than one-fourth of the Canadian population is French-speaking, only 8.01 percent of the participants on Canada's national teams at the Olympics since 1948 have been

French Canadians. Since 1950, only 11.92 percent of Canadians on the British Commonwealth Games team have been French-speaking. Of the total number of members of Canada's Pan-American Games teams at the 1959 and 1963 Games, only 10.42 percent were French Canadians. In sum, since World War II, 8.94 percent of the total participants at the three international games have been French Canadian.

Participation by sport, of French Canadians, indicates that they composed 49.21 percent of the weightlifters, 30.77 percent of the gymnasts, 28.57 percent of the cyclists, 24.07 percent of the fencers, 18.82 percent of the skiers, 16.48 percent of the boxers and 12.5 percent of the tug-of-war team. For all other events the percentage was less than six percent with the exception of ice hockey at 9.43 percent

The results from this study were presented to give some indication of French Canadian sport participation. It can be assumed that all other competitors were English-speaking Canadians. It is interesting to note that French Canadians participated in those categories (weightlifting, gymnastics, cycling and fencing) in which English Canadians have not traditionally been strong. With the cultural changes that have taken place recently in Quebec it would be interesting to see whether, in fact, the percentage of French Canadian participants has increased for those activities which have been dominated by English Canadians.

CHAPTER III

METHODS AND PROCEDURES

Sample Size and Location

The area in which the testing took place is situated along the Ontario-Quebec border some 400 miles northwest of Montreal, Quebec, and 450 miles north of Toronto, Ontario. This particular area was chosen due to the fact that French and English Canadians could be tested within sixty miles of each other and yet not be integrated.

Rouyn-Noranda are twin cities with a population of some 40,000 inhabitants. It is situated some twenty miles inside the western Quebec border. Kirkland Lake, a city of 20,000-25,000 citizens, is situated in Ontario, sixty miles west of Noranda, Quebec. Both are mining cities and have similar economic and geographical characteristics. Rouyn-Noranda is mainly French-speaking while Kirkland Lake is almost entirely English-speaking.

The small French village of Notre Dame de Grace (NDG) is situated in a rural area about thirty miles southwest of Rouyn-Noranda, and is situated in a valley which contains the only fertile land in the rugged terrain of northwestern Quebec.

A total of 983 students were selected for the study. Of this total, 766 French and English, grade ten and twelve, secondary school students were chosen for the purposes of the French-English and male-female comparisons. The subjects were selected by classes at random and the number of classes selected was determined by the school's grade ten and twelve enrollment.

For the French grade ten sample, girls ($N = 138$) were selected from Ecole Normale, Meré Bruyère and Ecole Secondaire in Rouyn-Noranda. The English female grade ten sample ($N = 102$) was from Kirkland Lake Collegiate and Vocational Institute (KLCUI) in Kirkland Lake. The grade twelve French female sample ($N = 95$) was drawn from Ecole Paul VI, while its English equivalent ($N = 60$) was selected from KLCUI.

The French Canadian grade ten male sample ($N = 141$) was selected from Ecole Normale and Ecole Secondaire while the English grade ten male sample ($N = 84$) was from KLCUI. The male grade twelve French sample ($N = 73$) was from Ecole Paul VI, while its English equivalent ($N = 84$) was drawn from KLCUI.

In addition, a separate sample of 217 French grade eleven students were chosen as subjects for the urban-rural comparison. The rural sample consisted of males and females ($N = 122$) from the regional school at Notre Dame de Grace. The urban sample of males and females ($N = 95$) was selected from Ecole Normale and Ecole Paul VI in Rouyn-Noranda, Quebec. This sample was selected purely for the purposes of additional information concerning the French culture and no comparisons will be made with any English equivalent.

In order to obtain permission to enter the schools, letters were sent to the regional director of physical education in the Quebec area and to the principal of KLCUI in Kirkland Lake. Both individuals assisted in the testing of the students.

Time and Duration of Study

The testing was done during the month of May, 1970. All of the English students were tested in two sittings. The French students were tested during their normal physical education period.

Test Instruments Used

Three different testing instruments were used (see Appendix A), each was colour coded, and all were answered on a single IBM digitex answer sheet. The instruments used, their code names and colour, and approximate time required for test completion were as follows:

<u>Instrument</u>	<u>Code Name</u>	<u>Time Required</u>	<u>Colour</u>
1. Attitude to Physical Activity	B.A.T.	20 minutes	Green
2. General Information Inventory	G.I.N.	10 minutes	Red
3. Jensen-Glassford	J.G.	<u>10 minutes</u> 40 minutes	Blue

The Kenyon questionnaire was changed to a Likert type scale for the following reasons:

1. To facilitate handling of the data
2. In a pre-test, subjects found the seven point scale to be too fine a differentiation to make.

Test Methods and Procedures

1. IBM answer sheets and the green B.A.T. inventory were handed out to the subjects.
2. Students were instructed, using the example on page one of the B.A.T. inventory, on how to record answers on the answer sheet. The subjects were asked to raise their hand if they had any problem or question to ask.
3. Once all subjects had completed the B.A.T. inventory the red G.I.N. inventories were handed out face down and the green B.A.T. inventories collected.
4. Students were instructed as to where to record answers for the G.I.N. inventory on the answer sheet.

5. Once all students had finished the G.I.N. inventory, that inventory was collected and the blue J.G. inventory was handed out.
6. Students were instructed as to where and how to answer the J.G. questionnaire on the answer sheet. A special emphasis was placed upon the reading of the blue cover page of the J.G. inventory in order to emphasize that the purpose of the questionnaire was measuring which category of games they preferred and not which games.
7. Once the subjects had completed the J.G. inventory they were instructed as to how to fill in the group data.
8. Answers were collected and checked to be certain the group data was correct and each individual was given an identification number.

Data Processing

Before any statistical analysis could be made the following steps had to be taken to put the data into matrices.

The IBM answer sheets were subjected to an optical scanner and computer cards were automatically punched. The cards were run through a Fortran program in order to put the data for each individual onto two cards.

Card 1:	Columns 1 to 4	Identification Number
	Column 5	Card Number (1)
	Columns 7 to 12	Group Data
	Columns 15 to 70	B.A.T. Responses
Card 2:	Columns 1 to 4	Identification Number
	Column 5	Card Number (2)
	Column 7 to 12	Group Data
	Column 15 to 43	G.I.N. Responses
	Column 44 to 55	J.G. Responses

This program also reversed the results in the B.A.T. inventory for those three word pairings which utilized a negative to positive rather

than a positive to negative Likert scale. Responses in these columns were reversed so that they matched the positive to negative trend of the other five word pairings. This facilitated the analysis of the seven subdomains of held attitudes since responses were thereby made additive.

The cards were then put through a program which produced three (3) matrices for each subdomain. Each slot in the matrix contained the number of responses recorded by subjects to that particular question at one of the levels of the Likert (B.A.T. and J.G.) or the three point (G.I.N.) scale. The first matrix (B.A.T.) was 5x56, the second (G.I.N.) 3x29, and the third (J.G.) 5x12.

Analysis of B.A.T. Data

It was necessary to collapse each 5x8 section of the 5x56 matrix into a 5x1 matrix as each subject recorded eight (8) answers concerning each subdomain. This was done by adding up all responses for each of the five (5) levels of the Likert scale. The numbers in the 5x1 matrices were then divided by eight (8) to give the number of individuals responding to each of the five Likert levels for each subdomain of physical activity.

A program was set up to:

1. Perform a chi square analysis at the 0.01 level of significance between 1x5 matrices from different sub-groups.
2. Give the percentage of subjects of the number of subjects who responded to each of the five Likert levels for each subdomain.
3. Give a mean score for each sub-group score for each subdomain by which they could be ranked. A rating of one was a highly positive attitude while a rating of five was a highly negative attitude.

Analysis of G.I.N. Data

The 3x29 matrix was separated into twenty-nine 1x3 matrices, and chi squares and percentages were calculated, via a computer program, for comparisons among sub-groups.

Analysis of J.G. Data

The analysis of the J.G. data was similar to that of the B.A.T. data.

Development of a Game Preference Measurement Instrument

There has been no work, of the questionnaire variety, done to test the conflict enculturation hypothesis of Roberts and Sutton-Smith between two cultures. Most of the work done by Roberts and Sutton-Smith involved the classification of games among the native cultures of Africa and North American Indians although some research dealt with American samples.

Sutton-Smith (1965) found that what subjects said they did in response to such inventories did not always correspond to their actual behavior. He later pointed out that the problems with psychological studies lay in the development of adequate measurements of play and game involvement. In a letter (1970) concerning this present study, he stated, "I think you will have to develop your own scale suitable to local dialect, expressions and terms."¹

¹ Personal correspondence with the author, March 22, 1970.

Several possibilities were considered and tried before the present questionnaire form was developed. One such pre-test involved the use of a semantic differential questionnaire. Four pure games from each of the three categories were selected at random and paired.

Example: Bingo ___ ___ ___ ___ ___ ___ ___ Checkers

The questionnaire was given to seventy-five physical education graduate and undergraduate students at The University of Alberta. The main drawback was the fact that the actual naming of sports and games biased the results. One strong point in favour of the approach, however, was the fact that when two games from the same category were paired ninety per cent of the subjects scored neutral on the semantic scale.

A significant drawback was the fact that a limited number of "pure" games were available for each of the categories. It was also very important that the students be aware of these games, the nature of each game, how the games were played, and what was needed to succeed.

The development of the present questionnaire was done in the following manner.

1. Professional people in the test area were contacted and asked to list games which:
 - (a) had a high level of local familiarity;
 - (b) were played most frequently by children and by students.
2. With the help of a questionnaire used by Glassford (1970) in a study of games of the Canadian Eskimo, twelve questions were developed.
3. Four questions were developed for each of the three categories (Chance, Physical Skill, and Strategy) for a total of twelve questions.

CHAPTER IV

RESULTS AND DISCUSSION

A total of 983 secondary school students were tested. The English sample consisted of 319 grade ten and twelve males and females while the French sample was made up of 447 students from the same categories. The separate rural-urban sample contained a total of 217 French grade eleven boys and girls. It is essential for a complete understanding of the charts to follow that there is no English equivalent of the rural-urban sample. The rural-urban sample is presented merely as additional information concerning the French culture. There is no detailed analysis of this sample.

Attitude Towards and Participation in Physical Activity

For the purpose of this section, a chi square analysis at the 0.01 level of significance was used to test for differences between the following comparisons: French-English, French female-French male, English female-English male, French and English males-French and English females, and urban-rural. The ranking of the subdomains (Tables XV and XVI) was done by the means which will be indicated in parentheses. In calculating the means a weighting system was used which ranged from a weight of one being assigned to a highly positive response on the Likert scale to a weight of five being assigned to an extremely negative response.

Differences in Attitudes Among Sub-Populations

Physical Activity as a Social Experience (Table I). A chi square analysis, at the 0.01 level of significance, showed no significant differences for any of the comparisons. All groups expressed a very positive

attitude towards physical activity as a social experience. Females expressed a more positive interest than males in this subdomain with 56.2 percent rating it one (1) on the Likert scale as compared with 44.4 percent of the boys. English females had the most positive attitude towards physical activity as a social experience with 59.8 percent rating it one (1) and only 1.4 percent rating it five. Both French (1.92) and English (1.93) males ranked this subdomain second out of the seven subdomains while the French (1.83) and English (1.95) females ranked it third and fourth, respectively. The aggregate French sample (1.87) and the total English sample (1.94) ranked it third as well.

Physical Activity for Health and Fitness (Table II). A chi square analysis showed no significant differences for any of the comparisons. Again, all groups showed a positive attitude with the French expressing a slightly stronger positive attitude than the English as did the females as compared to the males. The French (1.73) ranked physical activity for health and fitness first out of the seven subdomains while the English (1.94) ranked it fourth. This subdomain ranked first and third for French (1.77) and English (2.01) males, respectively, while the French (1.69) and English (1.86) females ranked it second and third, respectively.

It would appear, from these results, that the fitness and health benefits derived from physical activity are still considered to be a prime reason for involvement in activities of a physical nature.

Physical Activity as the Pursuit of Vertigo (Table III). There were no significant differences for any of the comparisons with the largest chi square (6.114) found between males and females, males showing the more positive attitude. This could be due to the fact that it is considered more acceptable in both sub-cultures for males to participate in

TABLE I
ATTITUDE TOWARDS PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	227.0	51.0	99.0	22.2	83.8	18.8	18.7	4.2	17.0	3.8
English	170.3	53.5	73.3	23.0	54.4	17.1	11.4	3.6	8.9	2.8
Chi Square = 1.3507 ^{ns}										
French Female	124.6	53.7	48.0	20.7	41.8	18.0	7.6	3.3	9.9	4.3
French Male	102.4	48.1	51.0	23.9	42.0	19.7	11.1	5.2	7.1	3.3
Chi Square = 2.6267 ^{ns}										
English Female	96.5	59.8	58.9	36.4	25.4	15.7	4.1	2.6	2.3	1.4
English Male	73.8	47.1	40.1	25.6	29.0	18.5	7.3	4.6	6.6	4.2
Chi Square = 7.2202 ^{ns}										
Male	176.1	44.4	91.1	23.0	71.0	17.9	18.4	4.6	13.8	3.5
Female	221.1	56.2	106.9	27.2	67.1	17.1	11.8	3.0	12.1	3.1
Chi Square = 5.0400 ^{ns}										
Urban	50.6	53.3	21.5	22.6	15.0	15.8	4.8	5.0	3.1	3.3
Rural	65.9	54.2	26.7	22.0	20.3	16.7	5.3	4.3	3.0	2.5
Chi Square = 0.2212 ^{ns}										

ns - not significant at the 0.01 level of significance

TABLE II
ATTITUDE TOWARDS PHYSICAL ACTIVITY FOR HEALTH AND FITNESS

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	258.0	58.0	87.9	19.7	70.0	15.7	16.5	3.7	12.8	2.9
English	152.9	48.1	70.5	22.2	69.3	22.8	14.4	4.5	11.6	3.7
Chi Square = 8.2794 ^{ns}										
French Female	139.0	60.0	44.6	19.2	33.5	14.4	8.3	3.6	6.6	2.9
French Male	119.0	55.9	43.3	20.3	36.5	17.1	8.3	3.9	6.1	2.9
Chi Square = 0.9208 ^{ns}										
English Female	82.1	50.9	34.9	21.6	33.5	20.7	6.8	4.2	4.5	2.8
English Male	70.8	45.2	35.6	22.8	35.8	22.8	7.6	4.9	7.1	4.6
Chi Square = 1.4983 ^{ns}										
Male	189.8	47.9	78.9	19.9	72.3	18.2	15.9	4.0	13.3	3.3
Female	221.1	56.2	79.5	20.2	67.0	17.0	15.0	3.8	11.1	2.8
Chi Square = 2.0687 ^{ns}										
Urban	58.1	61.2	17.9	18.9	13.5	14.2	3.1	3.2	2.0	2.1
Rural	63.3	52.1	28.6	23.6	19.1	15.7	4.9	4.0	5.6	4.6
Chi Square = 2.4734 ^{ns}										

ns - not significant at the 0.01 level of significance

dangerous and thrilling activities. All groups ranked this subdomain sixth with the exception of the French females (2.66), who ranked it fifth.

Subjects did not score this subdomain as high as those of health and fitness and social experience. This ranking may reflect in part a failure on the part of the subjects to recognize this subdomain as an integral element of many of the more popular sports such as skiing and ice hockey.

Physical Activity as an Aesthetic Experience (Table IV). A chi square analysis yielded a significant difference for male-female, French male-French female, and English male-English female comparisons. All groups showed a very positive attitude towards physical activity as the beauty of human movement with the females scoring higher than the males. Over sixty-seven percent of the females rated this subdomain as one (1) on the Likert scale as compared with 38.9 percent of the males.

These findings would suggest that this subdomain is associated with characteristics which have more feminine appeal. While cultural differences appear to be nil, the dichotomy between that which is feminine and that which is masculine does not, as yet, appear to have broken down in either sub-culture.

This subdomain ranked first among the seven areas for both English (1.48) and French (1.47) females while it ranked fourth for the males. The English sample (1.84), as a whole, ranked physical activity as an aesthetic experience first while the French sample (1.81) ranked this subdomain second.

Physical Activity for Catharsis (Table V). All groups showed a positive attitude towards this subdomain with over forty percent of the

TABLE III
ATTITUDE TOWARDS PHYSICAL ACTIVITY AS THE PURSUIT OF VERTIGO

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	120.1	27.0	101.5	22.8	111.8	25.1	52.3	11.7	59.4	13.3
English	83.9	26.4	77.6	24.4	84.6	26.6	33.1	10.4	38.9	12.2
Chi Square = 0.8614 ^{ns}										
French Female	55.0	23.7	51.6	22.3	61.6	26.6	27.5	11.9	35.8	15.4
French Male	65.1	30.6	49.9	23.4	50.1	23.5	24.8	11.6	23.6	11.1
Chi Square = 3.9652 ^{ns}										
English Female	36.0	22.3	40.5	25.1	46.0	28.5	20.0	12.4	19.3	11.9
English Male	47.9	30.6	37.1	23.7	38.6	24.7	13.1	8.4	19.6	12.5
Chi Square = 3.8106 ^{ns}										
Male	113.0	28.5	87.0	21.9	88.9	22.4	37.9	9.6	43.3	10.9
Female	91.0	23.1	92.1	23.4	107.6	27.4	47.5	12.1	55.0	14.0
Chi Square = 6.1140 ^{ns}										
Urban	27.5	28.9	22.3	23.4	20.8	21.9	12.9	13.6	11.3	11.8
Rural	26.6	21.9	27.9	22.9	32.0	26.3	18.4	15.1	16.4	13.5
Chi Square = 1.7042 ^{ns}										

ns - not significant at the 0.01 level of significance

TABLE IV
ATTITUDE TOWARDS PHYSICAL ACTIVITY AS AN AESTHETIC EXPERIENCE

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	240.0	54.0	72.0	16.2	72.5	16.3	24.9	5.6	21.9	4.9
English	178.8	56.2	56.6	17.8	55.0	17.3	11.0	3.5	17.3	5.4
Chi Square = 2.2452 ^{ns}										
French Female	152.6	65.8	26.9	11.6	27.0	11.6	6.6	2.9	5.6	2.4
French Male	87.6	41.1	45.1	21.2	45.5	21.4	18.3	8.6	16.3	7.6
Chi Square = 37.4481*										
English Female	112.0	69.3	26.5	16.4	18.6	11.5	2.0	1.2	2.8	1.7
English Male	66.8	42.7	30.1	19.2	36.4	23.2	9.0	5.7	14.5	9.3
Chi Square = 29.7982*										
Male	154.4	38.9	75.3	19.0	81.9	20.6	27.3	6.9	30.8	7.8
Female	264.6	67.2	53.4	13.6	45.6	11.6	8.6	2.2	8.4	2.1
Chi Square = 65.3494*										
Urban	51.4	54.1	16.4	17.2	14.4	15.1	4.3	4.5	8.5	8.9
Rural	75.5	62.1	22.5	18.5	13.1	10.8	4.9	4.0	5.8	4.7
Chi Square = 2.8925 ^{ns}										

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

total sample rating it a one on the Likert scale. None of the comparisons on this subdomain were significantly different from each other. This subdomain ranked first among the seven for English males (1.93) and third for the French males (2.08). The French females (2.01) and the total French sample (2.04) ranked physical activity for catharsis fourth while the English females (1.80) and the total English sample (1.86) ranked it third. The English expressed slightly more positive an attitude than the French towards physical activity for the release of tension. This difference was small and not statistically significant.

Physical Activity as an Ascetic Experience (Table VI). A chi square analysis showed no significant differences. The largest chi square (8.0192) was between French and English with the French showing the more positive attitude. All groups ranked this subdomain sixth with the exception of French females (2.66) who ranked it fifth.

Physical Activity as Games of Chance (Table VII). When the chance element of physical activity was examined, a significant difference in attitude was found between the French and English sub-cultures. Although the means for the two samples were extremely close (French = 2.93, English = 2.90) the distribution of responses differed. On the Likert scale the French responded more frequently at the extremes whereas the English had a greater frequency of responses around the neutral portion of the scale.

One explanation for the occurrence could be that games of chance were traditionally looked upon with disfavour by the French Catholic Church. Those who still adhere to the church and its beliefs would score this category a negative five (5) on the Likert scale whereas those youths who are attempting to break away from the traditional ties of the

TABLE V
ATTITUDE TOWARDS PHYSICAL ACTIVITY FOR CATHARSIS

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	210.0	47.2	90.9	20.4	83.4	18.7	27.1	6.1	32.9	7.4
English	167.9	52.8	63.9	20.1	60.4	19.0	14.3	4.5	12.1	3.8
Chi Square = 6.0943 ^{ns}										
French Female	113.5	48.9	45.3	19.5	42.5	18.3	15.4	6.6	15.1	6.5
French Male	96.5	45.3	45.6	21.4	40.9	19.2	11.8	5.5	17.8	8.3
Chi Square = 1.2707 ^{ns}										
English Female	89.9	55.7	30.8	19.0	29.8	18.4	7.9	4.9	3.8	2.3
English Male	78.0	49.8	33.1	21.1	30.6	19.6	6.4	4.1	8.4	5.4
Chi Square = 2.7679 ^{ns}										
Male	174.5	44.0	78.8	19.9	71.5	18.0	18.1	4.6	26.1	6.6
Female	203.4	51.7	76.0	19.3	72.3	18.4	23.3	5.9	18.9	4.8
Chi Square = 3.2618 ^{ns}										
Urban	40.8	42.9	16.9	17.8	17.0	17.9	9.4	9.9	10.9	11.4
Rural	50.0	41.2	30.5	25.1	22.0	18.1	10.5	8.6	8.8	7.2
Chi Square = 2.4996 ^{ns}										

ns - not significant at the 0.01 level of significance

TABLE VI
ATTITUDE TOWARDS PHYSICAL ACTIVITY AS AN ASCETIC EXPERIENCE

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	123.6	27.8	89.5	20.1	113.9	25.6	57.6	12.9	59.1	13.3
English	63.3	19.9	59.9	18.8	90.9	28.6	51.5	16.2	51.9	16.3
Chi Square = 8.0192 ^{ns}										
French Female	59.6	25.7	49.4	21.3	61.4	26.5	27.9	12.0	33.3	14.3
French Male	64.0	30.0	40.1	18.8	52.5	24.6	29.8	14.0	25.9	12.1
Chi Square = 1.9516 ^{ns}										
English Female	28.8	17.8	32.5	20.1	47.9	29.6	25.9	16.0	25.8	15.9
English Male	34.5	22.0	27.4	17.5	43.0	27.5	25.6	16.4	26.1	16.7
Chi Square = 1.1729 ^{ns}										
Male	98.5	24.8	67.5	17.0	95.5	24.1	55.4	14.0	52.0	13.1
Female	88.4	22.5	81.9	20.8	109.3	27.8	53.8	13.7	59.0	15.0
Chi Square = 2.6040 ^{ns}										
Urban	32.8	34.5	21.3	22.4	19.3	20.3	11.1	11.7	10.0	10.5
Rural	30.4	25.0	25.0	20.6	30.0	24.7	21.4	17.6	14.6	12.1
Chi Square = 3.5166 ^{ns}										

ns - not significant at the 0.01 level of significance

TABLE VII
ATTITUDE TOWARDS PHYSICAL ACTIVITY AS GAMES OF CHANCE

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	81.1	18.2	55.8	12.5	110.8	24.9	57.8	13.0	139.0	31.2
English	45.5	14.3	49.3	15.5	105.0	33.0	49.4	15.5	68.5	21.5
Chi Square = 14.4841*										
French Female	41.4	17.8	31.5	13.6	59.1	25.5	29.1	12.6	70.5	30.4
French Males	39.8	18.7	24.3	11.4	51.6	24.2	28.8	13.5	68.5	32.2
Chi Square = 0.7236 ^{ns}										
English Female	23.5	14.6	25.4	15.7	53.6	33.2	25.6	15.9	34.7	21.4
English Male	22.0	14.1	23.9	15.3	51.4	32.8	23.8	15.2	33.9	21.6
Chi Square = 0.0268 ^{ns}										
Male	61.8	15.6	48.1	12.1	103.0	26.0	52.5	13.2	102.4	25.8
Female	64.9	16.5	56.9	14.5	112.8	28.7	54.8	13.9	105.1	26.7
Chi Square = 0.4004 ^{ns}										
Urban	17.0	17.9	13.4	14.1	22.8	24.0	15.4	16.2	26.4	27.8
Rural	23.0	18.9	18.1	14.9	28.8	23.7	17.6	14.5	36.5	30.1
Chi Square = 0.2264 ^{ns}										

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

church might tend to score this subdomain at the more positive one (1) on the scale.

Differences in Participation in Physical Activity Among the Sub-Populations

Results for this section are drawn from questions seven to thirteen of the G.I.N. inventory. Each of the seven questions was designed to measure the amount of participation in one of the seven subdomains. The three categories of participation were: at least once per week, once or twice per month, and less often or never.

Physical Activity as a Social Experience (Table VIII). A chi square analysis showed a significant difference for the French-English comparison at the 0.01 level of significance. Although no other differences were found, all groups stated that they participated in physical activity as a social experience very frequently. Stated participation in activities associated with this subdomain ranked second among the seven for all groups.

Despite the fact that there was no significant difference between French and English attitude towards this subdomain the English indicated a significantly higher participation level in physical activity as a social experience. This would tend to suggest that the English population has a greater opportunity or creates a greater opportunity to participate in activities of this nature. It has only been in recent years that the number of French Canadians playing such activities as golf, curling and tennis has exceeded, to any significant degree, the number of English participants (in the province of Quebec), despite the fact that the French vastly outnumber the English. Facilities for these types

TABLE VIII
PARTICIPATION IN PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
French	247	55.7	124	28.0	72	16.2	4	447
English	208	65.3	82	25.8	28	8.8	1	319
Chi Square = 11.0230*								
French Female	132	56.8	64	27.5	36	15.5	1	233
French Male	115	54.5	60	28.5	36	17.0	3	214
Chi Square = 0.3042 ^{ns}								
English Female	109	67.1	44	27.1	9	5.5	0	162
English Male	99	63.4	38	24.3	19	12.1	1	157
Chi Square = 4.3787 ^{ns}								
Male	214	58.3	98	26.7	55	15.0	4	371
Female	241	61.2	108	27.4	45	11.4	1	495
Chi Square = 2.1322 ^{ns}								
Urban	58	60.8	25	26.2	12	12.6	0	95
Rural	65	53.1	40	32.7	17	13.9	0	122
Chi Square = 1.3833 ^{ns}								

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

of activities were built mainly for the English managerial staff in the former years and only recently have these types of facilities been available to the French Canadian public.

Physical Activity for Health and Fitness (Table IX). A chi square analysis yielded no significant differences between any of the comparisons. All groups expressed extremely high participation in this subdomain with over seventy percent of the total sample participating at least once per week. It is interesting to note that despite the fact that this subdomain ranked as low as fourth for two of the groups on the attitude inventory, all groups ranked this subdomain first by participation. It would appear that physical education programs are still very much fitness oriented.

Physical Activity as the Pursuit of Vertigo (Table X). A chi square analysis showed a significant difference for all comparisons. All male groups scored higher than all female groups, the English scored higher than the French, and the urban scored higher than rural. Male-female difference may be explained in part by the masculine appeal of this subdomain and in part by inadequacy of the questionnaire in that the respondees may not have clearly understood the various kinds of activities which could theoretically be included in this subdomain. The words "dangerous" and "thrilling" may well have conjured up in the subject's mind the more dangerous activities of auto racing and sky diving which have a strong masculine appeal. The availability of equipment and facilities may partially explain the French-English and urban-rural differences. It is also possible that in the rural setting many daily activities may be of a dangerous and thrilling type (for example, horse-back riding and tree climbing). In the urban setting the desire for these types of activities must be met vicariously in many cases.

TABLE IX
PARTICIPATION IN PHYSICAL ACTIVITY FOR HEALTH AND FITNESS

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
French	329	73.9	79	17.1	37	8.3	2	447
English	238	74.8	58	18.2	22	6.9	1	319
Chi Square = 0.5100 ^{ns}								
French Female	175	75.1	37	15.9	21	9.0	0	233
French Male	154	72.6	42	19.8	16	7.5	2	214
Chi Square = 1.3445 ^{ns}								
English Female	123	75.9	31	19.1	8	5.0	0	162
English Male	115	73.7	27	17.3	14	9.0	1	157
Chi Square = 2.0679 ^{ns}								
Male	269	73.1	69	18.8	30	8.1	3	371
Female	298	75.4	68	17.2	29	7.3	0	495
Chi Square = 0.5526 ^{ns}								
Urban	64	67.3	24	25.2	7	7.4	0	95
Rural	91	74.5	22	18.0	9	7.4	0	122
Chi Square = 1.7071 ^{ns}								

ns - not significant at the 0.01 level of significance

TABLE X
PARTICIPATION IN PHYSICAL ACTIVITY AS THE PURSUIT OF VERTIGO

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
French	109	24.5	149	33.6	186	41.9	3	447
English	128	40.1	101	31.7	90	28.2	0	319
Chi Square = 24.29*								
French Female	33	14.2	73	31.5	126	54.3	1	233
French Male	76	35.8	76	35.8	60	28.3	2	214
Chi Square = 39.62*								
English Female	47	29.0	54	33.3	61	37.6	0	162
English Male	81	51.5	47	30.0	29	18.5	0	157
Chi Square = 20.82*								
Male	157	42.5	123	33.3	89	24.1	2	371
Female	80	20.3	127	32.2	187	47.5	1	495
Chi Square = 59.12*								
Urban	30	31.6	33	34.7	32	33.7	0	95
Rural	17	14.0	44	36.3	60	49.6	1	122
Chi Square = 10.71*								

* - significant at the 0.01 level of significance

This subdomain ranked fifth by participation for the French sample and for French and English females. It ranked fourth for all other groups. On the attitude inventory, physical activity as the pursuit of vertigo ranked fifth for all groups except French females who ranked it sixth.

Physical Activity as an Aesthetic Experience (Table XI). An analysis of this data resulted in a significant difference between all male and female comparisons. Despite the fact that chi squares for all male-female comparisons are extremely high, it is interesting to note that the significant difference appeared to be more contingent upon male non-participation than high female participation. The female participation was slightly positive and all female groups ranked it fourth by participation despite the fact that both French and English females ranked this subdomain first on the attitude inventory. It would appear that the female students in the testing area are not getting a female oriented physical education program.

Physical Activity for Catharsis (Table XII). A chi square analysis showed a significant difference for the French-English comparison. The English participated more frequently in physical activity for the release of tension than the French. One explanation could be that the French do not recognize physical activity as serving this purpose. However, all groups, both French and English, ranked this subdomain third by participation. This would tend to suggest that the French Canadian either does not need release from tension as often as the English Canadian or that he uses other avenues to release some of his tension.

TABLE XI
PARTICIPATION IN PHYSICAL ACTIVITY AS AN AESTHETIC EXPERIENCE

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
French	140	31.6	123	27.7	180	40.6	4	447
English	80	25.1	80	25.1	159	49.8	0	319
Chi Square = 6.77 ^{ns}								
French Female	102	44.0	61	26.1	70	29.9	0	233
French Male	38	18.1	62	29.5	110	52.4	4	214
Chi Square = 37.06*								
English Female	59	36.3	49	30.2	54	33.3	0	162
English Male	21	13.3	31	19.7	105	67.7	0	157
Chi Square = 38.39*								
Male	59	16.1	93	25.3	215	58.6	4	371
Female	161	40.8	110	27.8	124	31.4	0	495
Chi Square = 72.21*								
Urban	34	36.0	21	22.3	39	41.3	1	95
Rural	44	35.9	35	28.6	43	35.1	0	122
Chi Square = 1.37 ^{ns}								

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

TABLE XII
PARTICIPATION IN PHYSICAL ACTIVITY FOR CATHARSIS

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
French	193	43.3	130	29.0	122	27.7	2	447
English	147	46.2	115	36.1	56	17.6	1	319
Chi Square = 10.76*								
French Female	105	45.0	66	28.3	62	27.0	0	233
French Male	88	41.4	64	30.1	60	28.2	2	214
Chi Square = 0.57 ^{ns}								
English Female	67	41.3	62	38.2	33	20.3	0	162
English Male	80	51.2	53	34.0	23	14.7	1	157
Chi Square = 3.53 ^{ns}								
Male	168	45.6	117	31.8	83	22.6	3	371
Female	172	43.5	128	32.4	95	24.1	0	495
Chi Square = 0.39 ^{ns}								
Urban	55	57.6	24	25.2	16	16.8	0	95
Rural	52	42.5	41	33.5	29	23.7	0	122
Chi Square = 5.00 ^{ns}								

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

Physical Activity as an Ascetic Experience (Table XIII). A chi square analysis showed a significant difference for all male-female comparisons. The males, both French and English, noted a greater participation in this subdomain than the females. These differences occurred despite the fact that there were no significant differences between any of the comparisons in attitude towards this subdomain. The two subcultures look upon this as a masculine activity and female participation in physical activity as prolonged and rigorous training is not overly encouraged. This subdomain ranked fifth for French males, seventh for English females, and sixth for all other groups.

Physical Activity as Games of Chance (Table XIV). A chi square analysis showed a significant difference at the 0.01 level of significance between the French-English, English female-English male, and the male-female samples. The opportunity to participate plus the negative attitude of the French Catholic Church toward activities of this nature may, in part, account for these differences.

None of the groups expressed great participation in physical activity as games of chance. All French groups ranked it seventh out of the seven subdomains while all English groups ranked it sixth.

Comparison of Attitudes Towards Physical Activity with Participation in Physical Activity

The rankings of the seven subdomains by means from the attitude inventory is found in Table XV. A similar ranking from participation scores is found in Table XVI.

Tables XVII to XX juxtapose scores for each of the seven subdomains on attitudes with those on participation. For the purpose of this study a score of one or two on the Likert attitude scale was

TABLE XIII
PARTICIPATION IN PHYSICAL ACTIVITY AS AN ASCETIC EXPERIENCE

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
French	109	24.5	105	23.6	231	51.9	2	447
English	79	25.1	86	27.3	150	47.6	4	319
Chi Square = 1.71 ^{ns}								
French Female	43	18.4	49	21.0	141	60.4	0	233
French Male	66	31.0	56	26.4	90	42.4	2	214
Chi Square = 15.62 [*]								
English Female	26	16.1	33	20.5	102	63.3	1	162
English Male	53	34.3	53	34.3	48	31.1	3	157
Chi Square = 33.18 [*]								
Male	119	32.5	109	29.8	138	37.7	5	371
Female	69	17.5	82	20.8	243	61.7	1	495
Chi Square = 45.08 [*]								
Urban	25	26.3	21	22.1	49	51.5	0	95
Rural	24	19.6	41	33.5	57	46.6	0	122
Chi Square = 3.77 ^{ns}								

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

TABLE XIV
PARTICIPATION IN PHYSICAL ACTIVITY AS GAMES OF CHANCE

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
French	65	14.6	102	23.0	278	62.5	2	447
English	91	28.7	96	30.2	130	40.9	2	319
Chi Square = 37.76*								
French Female	43	11.6	49	21.0	141	67.2	0	233
French Male	38	17.9	53	25.0	121	57.0	2	214
Chi Square = 1.00 ^{ns}								
English Female	34	21.0	49	30.1	79	48.6	0	162
English Male	57	36.6	47	30.2	51	32.8	2	157
Chi Square = 11.74*								
Male	95	25.9	100	27.2	172	46.9	4	371
Female	61	15.4	98	24.8	236	59.7	0	495
Chi Square = 16.46*								
Urban	14	14.7	22	23.0	59	61.8	0	95
Rural	21	17.1	31	25.0	70	57.2	0	122
Chi Square = 0.51 ^{ns}								

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

TABLE XV

RANKING OF ATTITUDE MEANS

Rank	French			English		
	Female (Mean)	Male (Mean)	Total Sample (Mean)	Female (Mean)	Male (Mean)	Total Sample (Mean)
1	Aesthetic (1.47)	Health and Fitness (1.77)	Health and Fitness (1.73)	Aesthetic (1.48)	Catharsis (1.93)	Aesthetic (1.84)
2	Health and Fitness (1.69)	Social Experience (1.92)	Aesthetic (1.81)	Catharsis (1.80)	Social Experience (1.93)	Catharsis (1.86)
3	Social Experience (1.83)	Catharsis (2.08)	Social Experience (1.87)	Health and Fitness (1.86)	Health and Fitness (2.01)	Social Experience (1.94)
4	Catharsis (2.01)	Aesthetic (2.19)	Catharsis (2.04)	Social Experience (1.95)	Aesthetic (2.19)	Health and Fitness (1.94)
5	Ascetic (2.66)	Vertigo (2.49)	Vertigo (2.60)	Vertigo (2.66)	Vertigo (2.47)	Vertigo (2.58)
6	Vertigo (2.71)	Ascetic (2.57)	Ascetic (2.62)	Ascetic (2.90)	Ascetic (2.88)	Ascetic (2.89)
7	Chance (3.22)	Chance (3.27)	Chance (3.25)	Chance (3.15)	Chance (3.11)	Chance (3.13)
	N = 233	N = 214	N = 447	N = 162	N = 157	N = 319

TABLE XVI

RANKING OF SEVEN SUBDOMAINS BY PARTICIPATION

Rank	French			English		
	Female	Male	Total	Female	Male	Total
1	Health and Fitness	Health and Fitness	Health and Fitness	Health and Fitness	Health and Fitness	Health and Fitness
2	Social Experience	Social Experience	Social Experience	Social Experience	Social Experience	Social Experience
3	Catharsis	Catharsis	Catharsis	Catharsis	Catharsis	Catharsis
4	Aesthetic	Vertigo	Aesthetic	Aesthetic	Vertigo	Vertigo
5	Vertigo	Ascetic	Vertigo	Vertigo	Chance	Chance
6	Ascetic	Aesthetic	Ascetic	Chance	Ascetic	Ascetic
7	Chance	Chance	Chance	Ascetic	Aesthetic	Aesthetic
	N = 233	N = 214	N = 447	N = 162	N = 157	N = 319

juxtaposed with an "at least once per week" participation score. A score of three on the Likert attitude scale was juxtaposed with a "once or twice per month" participation score while an attitude score of four or five on the Likert scale was juxtaposed with a participation rating of "less often or never."

This was done so as to reduce the Likert scale to a three point scale in order to allow a visual comparison between attitude as expressed in the B.A.T. inventory and participation as expressed in the G.I.N. inventory. The four sub-groups analyzed graphically are French males, French females, English males, and English females.

French Females (Table XVIII) and French Males (Table XVIII).

From the results there are two methods of determining whether or not French schools in the testing area are meeting student needs and wants in their physical education program. The first method is by comparing the respective ranks of participation and expressed attitude towards the seven subdomains of physical activity. The ranking of the first three subdomains for French males are identical for both participation and attitude with the other four subdomains' rankings being very close. For the French female none of the rankings are the same for any subdomain relative to participation and attitude. The largest difference is for the aesthetic subdomain which ranks first by attitude but fourth by participation. All other participation rankings are within one place of their attitude rankings.

What the rankings do not reveal is whether the participation is frequent enough to satisfy the desire to participate. In order to determine the magnitude of the differences between attitude, as expressed on

the Likert scale, and participation, as expressed on the G.I.N. inventory the difference between the percentage of positive attitude responses (1 and 2) and the percentage of high participation responses ("at least once per week") was used. In cases where the attitude percentage was the larger of the two the percentage difference thus determined could be thought of as a participation lag.

Only in the subdomain of health and fitness is the participation lag within four percent. For French males, differences for the other subdomains are never lower than 17.0 percent (Social Experience) and they are as high as 44.0 percent (Aesthetic). For the French female, 18.0 percent is the next lowest participation lag (Social Experience) with a 38.0 percent difference for the aesthetic subdomain.

Clearly the most obvious participation lag was for the aesthetic subdomain. Over 62.0 percent of the French males and over 82.0 percent of the French females indicated a positive attitude towards this subdomain. It would seem that these needs are not being met in the physical education program or elsewhere. The girls appear to be receiving a slightly modified version of a boy's program and yet female involvement in male-type activities of an ascetic nature tend not to be viewed with favour in many sections of society in general. Over forty-seven percent of the females indicated they were interested in prolonged and rigorous training enroute to excelling in a competitive activity and yet only 18.4 percent were able to meet this need. There was a difference of 31.5 percent between expressed positive attitude toward and participation in dangerous and thrilling activities.

The question of program relivance as far as the French Canadian female is concerned would appear to be pertinent. Many other factors

such as lack of equipment, facilities, and qualified female physical educators are probably the *raison d'etre* for the discrepancies stated between expressed attitudes toward various types of activities and the amount of participation in them.

The French males' program requirements, with the exception of aesthetic type activities, are being met but perhaps not as completely as many of the males would like. The program for both males and females requires a greater depth in all areas with the inclusion of a greater variety of activities.

English Females (Table XIX) and English Males (Table XX). The term physical education has evolved, through several world wars, from the more fitness-oriented and rigid terms of physical training and calisthenics. Despite the name change, program content has not as yet fully evolved from the fitness-oriented programs to include the more educative type activities of basic movement, modern dance and creative gymnastics. Both French and English groups have shown that the health and fitness aspect of physical activity is being met in current physical education programs in the test area. Unfortunately the same is not true for many of the other subdomains of physical activity.

The ranking of the seven subdomains by participation was very close to the ranking by attitude for English males. The major difference was catharsis, which fell from an attitude rank of one to a participation rank of three. The aesthetic ranking also went from four to seven in the same direction. From an analysis of the differences between percentage of English male with a high positive rating and a high participation rating it is obvious that, with the exception of the aesthetic and cathartic areas, program requirements are being met. Participation lags of

48.0 percent and 33.0 percent were found for the English males between attitude and participation on the aesthetic and catharsis subdomains, respectively.

With the exception of the health and fitness area, program requirements for the English female are not being met. As was the case for the French female, the English females' rank for the aesthetic subdomain dropped from one on the attitude rank to four on the participation rank and had a participation lag of 49.0 percent. Despite the fact that the English female received fitness and male type activities in the physical education program, the subdomains of catharsis and ascetic showed participation lags of 33.0 percent and 22.0 percent, respectively.

The English physical education program appears to be meeting the needs of the students slightly better than the French programs did for the French students. This could be partially due to better facilities and qualified instructors. But the program does not appear to be meeting the desire for aesthetic type activities on the part of male and female students.

The females' program is much weaker than the males' program and lacks depth in all areas except health and fitness. If physical education is to instill in the students a desire to make creative useful use of their leisure time then more of the needs and desires of the students must be met in high school programs.

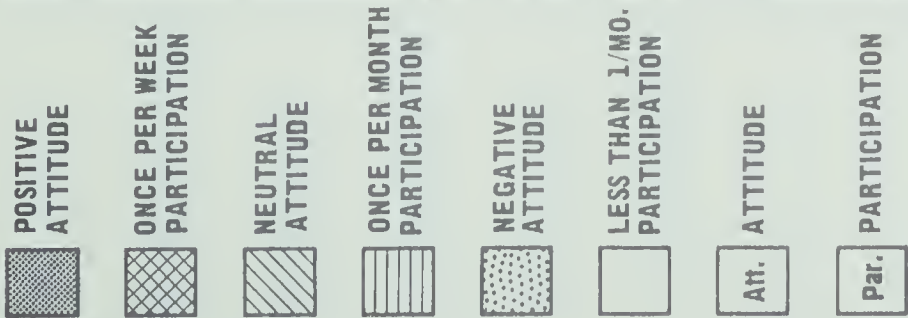


TABLE XVII



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

ATTITUDE vs PARTICIPATION

FRENCH FEMALE

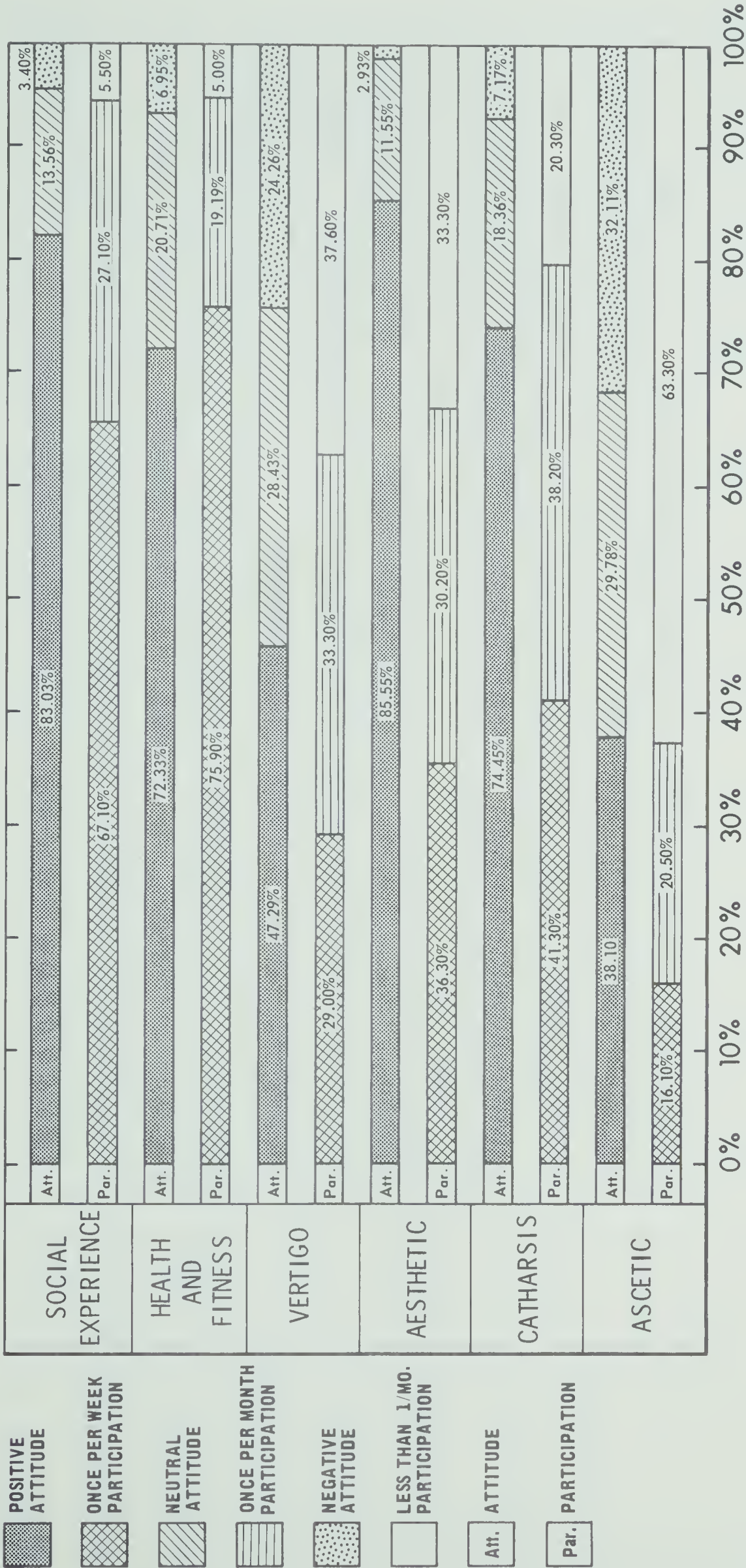
TABLE XVIII



ATTITUDE vs PARTICIPATION

FRENCH MALES

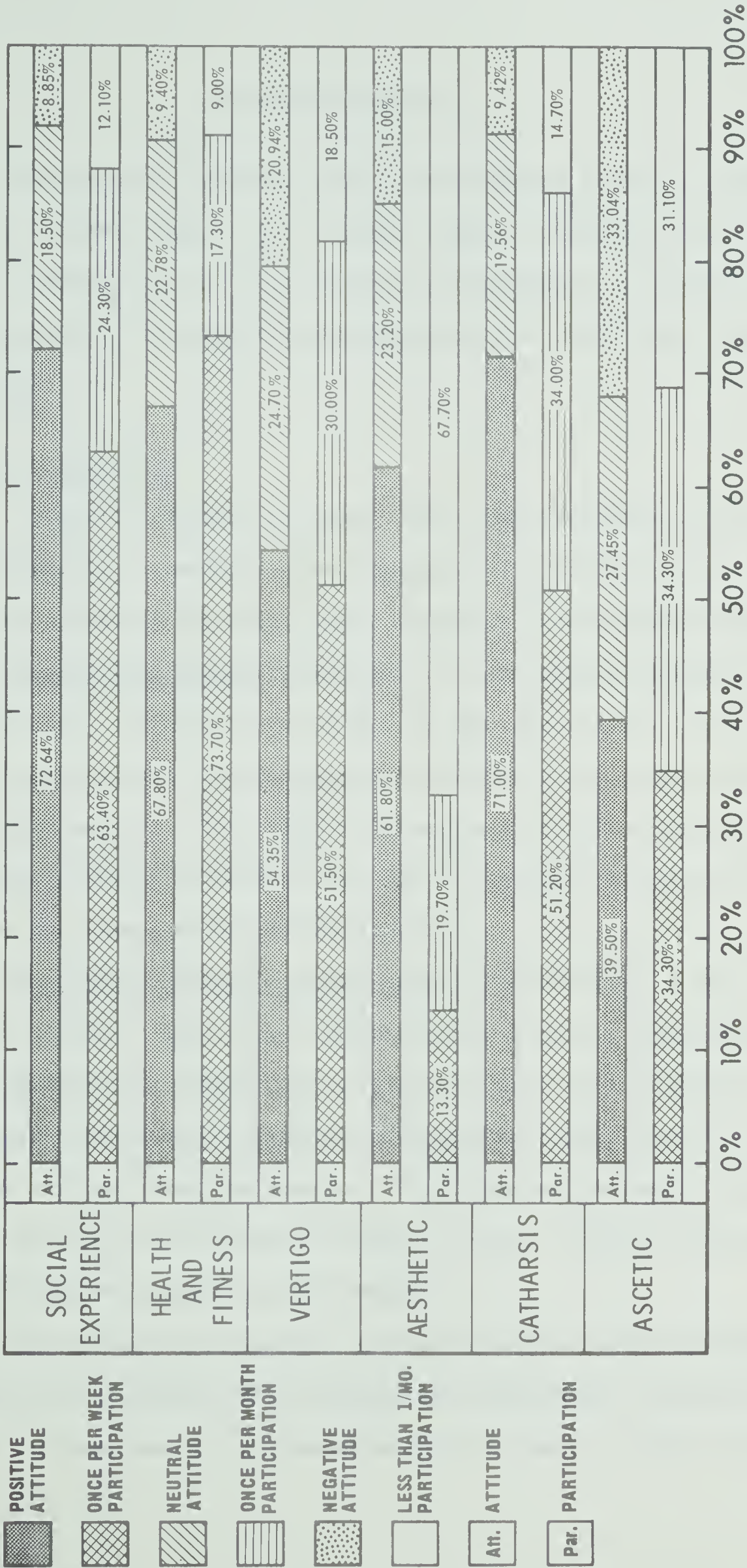
TABLE XIX



ATTITUDE vs PARTICIPATION

ENGLISH FEMALES

TABLE XX



ATTITUDE vs PARTICIPATION

ENGLISH MALE

General Information

The general information data was collected from 766 students of which 319 were English and 447 were French. There were 395 females and 371 males given the G.I.N. inventory (Appendix A). For the purposes of this section, only the French-English and the male-female comparisons were made.

Values and Interests

Subjects indicated the amount they were interested in each of the sections by responding to each question of a three point scale: The three levels of the scale were: very much, some, little or none.

Theoretical Matters (Table XXI). A chi square analysis showed no significant differences for either of the comparisons. In analyzing data it appears that all groups showed relatively the same interest in theoretical matters. The range of percentages is within three percent at all three levels of interest and the chi squares of 0.291 and 0.52 indicate the closeness of the distributions.

That Which is Practical and Useful (Table XXII). A chi square analysis yielded a significant difference for both the French-English and the male-female comparisons at the 0.01 level of significance. The French expressed a higher interest than did the English and the males a higher interest than the females. Of all groups the males scored the highest with thirty-six percent saying they were very much interested and 44.9 percent indicating some interest.

The results would seem to indicate that that which is practical and useful is associated with business and achievement orientation in the two cultures and is of greater interest to males as these are con-

TABLE XXI
INTEREST IN THEORETICAL MATTERS

	Very Much		Some		Little or None		No Response	Total	
	No.	%	No.	%	No.	%			
1	French	153	34.3	214	48.0	78	17.5	2	447
	English	108	33.8	159	49.8	52	16.3	1	319
<hr/>									
2	Male	122	33.0	185	50.1	62	16.8	2	371
	Female	139	35.1	188	47.5	68	17.2	0	395

1 Chi Square = 0.29 (Not significant at the 0.01 level of significance.)
2 Chi Square = 0.52 (Not significant at the 0.01 level of significance.)

TABLE XXII
INTEREST IN THAT WHICH IS PRACTICAL AND USEFUL

	Very Much		Some		Little or None		No Response	Total	
	No.	%	No.	%	No.	%			
1	French	146	32.8	195	43.8	104	23.3	2	447
	English	71	22.2	162	50.7	86	26.9	0	319
<hr/>									
2	Male	133	36.0	166	44.9	70	18.9	2	371
	Female	84	21.2	191	48.3	120	30.3	0	395

1 Chi Square = 10.17 (Significant at the 0.01 level of significance.)
2 Chi Square = 25.11 (Significant at the 0.01 level of significance.)

sidered largely male responsibilities. It must be realized that one question does not give a total picture of French or English achievement orientation, but it is interesting to note the high scores for the French Canadians on this question. This would seem to indicate a drastic shift in the French socialization process has occurred in recent years. The introduction of the more technically oriented C.E.G.E.P. approach in the Quebec education system is specifically geared towards modern day industrial society.

That Which is Beautiful (Table XXIII). An analysis of the data on this parameter showed a significant difference between males and females. Females led all groups with 67.3 percent expressing very much interest, 27.3 percent some interest, and only 5.3 percent no interest in that which is beautiful. All groups expressed a great deal of interest in this subdomain. It is evident that, in both cultures, aesthetic awareness is more a feminine than a masculine trait. A statistically significant portion of the female members of the sample indicated a stronger interest in form, individuality and creativeness than did the male members. This is not to imply that they were more creative but rather that they looked for such traits around them. The chi square between males and females was 70.278.

That Which Involves Other People (Table XXIV). A chi square analysis showed a significant difference for the male-female comparison. Again, the females scored higher (73.3 percent) than the males (57.7 percent) with all groups expressing great interest.

Many of the so called female occupations of nurse, stewardess, hostess, secretary, librarian, and teacher involve working with other

TABLE XXIII
INTEREST IN THAT WHICH IS BEAUTIFUL

	Very Much		Some		Little or None		No Response	Total
	No.	%	No.	%	No.	%		
1 French English	264	59.3	125	28.0	56	12.5	2	447
	158	49.5	108	33.8	53	16.6	0	319
<hr/>								
2 Male Female	156	42.2	125	33.8	88	23.8	2	371
	266	67.3	108	27.3	21	5.3	0	395

1 Chi Square = 7.36 (Not significant at the 0.01 level of significance.)

2 Chi Square = 70.28 (Significant at the 0.01 level of significance.)

TABLE XXIV
INTEREST IN THAT WHICH INVOLVES OTHER PEOPLE

	Very Much		Some		Little or None		No Response	Total
	No.	%	No.	%	No.	%		
1 French English	278	62.4	141	31.6	26	5.8	2	447
	220	69.1	82	25.7	16	5.0	1	319
<hr/>								
2 Male Female	213	57.7	128	34.6	28	7.5	2	371
	285	72.3	95	24.1	14	3.5	1	395

1 Chi Square = 3.71 (Not significant at the 0.01 level of significance.)

2 Chi Square = 19.15 (Significant at the 0.01 level of significance.)

people. It would appear that interest in that which involves other people is more evident in females than in males.

Politics (Table XXV). A chi square analysis at the 0.01 level of significance showed a significant difference for both the male-female and the French-English comparisons. Of the French sample, 37.3 percent expressed strong interest in politics while only 19.4 percent of the English expressed a similar interest.

French Canadians are concerned about their future in Canadian confederation; this, plus the fact that the Quebec provincial government is perhaps more important to the Quebec residents than other provincial governments are to their people, may account for the French-English difference. It also appears that politics are still considered to be male oriented as only 23.5 percent of the females expressed any interest in politics.

This figure tends to be somewhat spurious as a breakdown of the female data revealed that over 35.0 percent of the French females indicated strong interest in politics whereas less than 13.0 percent of the English females reflected a similar interest.

Religious Matters (Table XXVI). When the data were analyzed, significant chi square values were found for both sets of comparisons. Ten percent more of the English sub-culture expressed a strong interest in religious matters than did the French equivalents. It is difficult to explain the French-English differences without looking at recent developments in Quebec. The French Catholic church has long been the master of the French Quebecer. The church was very close to, and deeply involved with, Quebec government up to and including the Dupliessis era. In recent years there has been a vast swing away from the church in Quebec.

TABLE XXV
INTEREST IN POLITICS

	Very Much		Some		Little or None		No Response	Total
	No.	%	No.	%	No.	%		
1 French English	166	37.3	175	39.3	104	23.3	2	447
	62	19.4	139	43.5	118	36.9	0	319
<hr/>								
2 Male Female	135	36.5	151	40.9	83	22.4	2	371
	93	23.5	163	41.2	139	35.1	0	395

1 Chi Square = 32.54 (Significant at the 0.01 level of significance.)
2 Chi Square = 21.45 (Significant at the 0.01 level of significance.)

TABLE XXVI
INTEREST IN RELIGIOUS MATTERS

	Very Much		Some		Little or None		No Response	Total
	No.	%	No.	%	No.	%		
1 French English	101	22.6	186	41.7	158	35.5	2	447
	105	32.9	125	39.1	89	27.8	0	319
<hr/>								
2 Male Female	76	20.5	147	39.8	146	39.5	2	371
	130	32.9	164	41.5	101	25.5	0	395

1 Chi Square = 10.82 (Significant at the 0.01 level of significance.)
2 Chi Square = 22.41 (Significant at the 0.01 level of significance.)

The church, through its seminars and the classical colleges played a large role in Quebec education in past years. Courses were not particularly oriented towards achievement in the business and economic community but rather classically and religiously oriented.

During the last ten years there has been a drastic swing away from this to an educative system geared to the business community. As an indication of the shift the French showed a greater interest than the English in "that which is practical and useful." The church, in the eyes of many young people, represents that which has held them back.

Best Friends Participation in Physical Activity

In analyzing this section other researchers (Collins, 1967; Semotiuk, 1967) have compared results between each sub-group's best friends.

A more interesting comparison is one between the sub-group's participation and their own best friend's participation as perceived by each of the subjects. Each of the four major groups (male, female, French and English) were compared with their best friend's results. The important point to keep in mind is that the best friend's results are not necessarily a true indication of how those individuals would score participation in each of the seven subdomains but represent, in effect, the result of role taking by the sample. It must be remembered that this role taking is biased by the individuals' cognitive worlds and their selection of those stimuli which they perceive as being relevant in taking the role of the other. What these results will tell us is not necessarily how each sample compares with his best friend's re-

sults but rather how the individual's own interpretation of that subdomain and his attitude towards it affect the results he gives his best friend.

Social Experience (Table XXVII). A chi square analysis between self participation and perceived best friend's participation for each of the four groups showed no significant difference at the 0.01 level of significance. Because this subdomain is concerned with the social aspect of physical activity one would expect to find these results.

Health and Fitness (Table XXVIII). A chi square analysis shows significant differences for all comparisons. The chi squares for each are extremely high ranging from 26.04 to 42.32. A chi square of 9.21 is significant at the 0.01 level. Over 73.0 percent of all groups stated that they participated at least once per week in physical activity for health and fitness but only 54.8 to 55.5 percent perceive of their best friends as doing the same.

Because of the extremely high chi square and because best friends are in effect a random sample of the same population from which the testing sample was drawn, it is highly unlikely that these results accurately indicate that the sample is much more active in this subdomain than their best friends. A more likely explanation of the results is that the individual views physical activity for health and fitness as worthwhile and as being looked upon with favour by the society in which he lives. He perceives being active in this subdomain as worthy of reward. Therefore he tends to rank his best friends lower than he ranks himself as his self concept puts him slightly above or at least equal to his friend.

TABLE XXVII

PARTICIPATION IN PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE:

BEST FRIEND VERSUS SELF

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		Chi Square
	No.	%	No.	%	No.	%	
Males:							
Self	214	58.3	98	26.7	55	14.9	4.592 ^{ns}
Best Friend	189	51.3	124	33.6	55	14.9	
Females:							
Self	241	61.1	108	27.4	45	11.4	0.728 ^{ns}
Best Friend	235	59.4	107	27.0	53	13.4	
French:							
Self	247	55.7	124	27.9	72	16.2	2.248 ^{ns}
Best Friend	227	51.0	143	32.1	75	16.8	
English:							
Self	208	65.4	82	25.7	28	8.8	0.912 ^{ns}
Best Friend	197	61.9	88	27.6	33	10.3	

ns - not significant at the 0.01 level of significance

TABLE XXVIII

PARTICIPATION IN PHYSICAL ACTIVITY FOR HEALTH AND FITNESS:

BEST FRIEND VERSUS SELF

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		Chi Square
	No.	%	No.	%	No.	%	
Males:							
Self	269	73.0	69	18.7	30	8.1	26.036*
Best Friend	202	55.0	116	31.6	49	13.3	
Females:							
Self	298	75.4	68	17.2	29	7.3	37.348*
Best Friend	218	55.1	110	27.8	67	16.9	
French:							
Self	329	73.9	79	17.7	37	8.3	42.317*
Best Friend	244	54.8	135	30.3	66	14.8	
English:							
Self	238	74.8	58	18.2	22	6.9	27.480*
Best Friend	176	55.5	91	28.7	50	15.7	

* - significant at the 0.01 level of significance

Vertigo (Table XXIX) and Aesthetic (Table XXX). An analysis for these two subdomains showed no significant differences at the 0.01 level of significance. A possible explanation for these results is that despite the fact that all groups expressed a favourable attitude towards these two subdomains they scored their best friends as higher than themselves because they did not consider either as socially important as health and fitness. This is probably due to the fact that health and fitness was the founding basis upon which physical education programs were built and is still the driving force behind many of the programs.

Catharsis (Table XXXI). Significant differences were found between the subject's own expressed participation and perceived best friend's participation for all groups with the exception of the French. All groups, including French, scored themselves much higher than their friends. The explanation for this is similar to that for the health and fitness subdomain.

Ascetic (Table XXXII). An analysis yielded no significant differences for any of the comparisons. These results may have been partially due to an inability of the subjects to recognize this subdomain as a vital element in all competitive sports. This was evident when the subjects expressed their own participation. Because they fail to see this subdomain as being highly acceptable and as being looked upon with high regard by society, they score themselves and their best friend on a par.

Chance (Table XXXIII). All groups scored their best friend's participation in physical activity as games of chance higher than their own. An analysis of the data revealed that these differences were signi-

TABLE XXIX

PARTICIPATION IN PHYSICAL ACTIVITY AS THE PURSUIT OF VERTIGO:

BEST FRIEND VERSUS SELF

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		Chi Square
	No.	%	No.	%	No.	%	
Males:							
Self	157	42.5	123	33.3	89	24.1	0.896 ^{ns}
Best Friend	145	39.6	123	33.6	98	26.7	
Females:							
Self	80	20.3	127	32.2	187	47.4	0.024 ^{ns}
Best Friend	81	20.5	129	32.6	185	46.8	
French:							
Self	109	24.5	149	33.5	186	41.8	1.624 ^{ns}
Best Friend	126	28.3	143	32.1	176	39.5	
English:							
Self	128	40.1	101	31.6	90	28.2	5.192 ^{ns}
Best Friend	100	31.6	109	34.4	107	33.8	

ns - not significant to the 0.01 level of significance

TABLE XXX

PARTICIPATION IN PHYSICAL ACTIVITY AS AN AESTHETIC EXPERIENCE:
BEST FRIEND VERSUS SELF

	At Least Once Per Week		Once or Twice Per Week		Less Often or Never		Chi Square
	No.	%	No.	%	No.	%	
Males:							
Self	59	16.0	93	25.3	215	58.5	0.324 ^{ns}
Best Friend	56	15.3	88	24.0	222	60.6	
Females:							
Self	161	40.7	110	27.8	124	31.3	6.614 ^{ns}
Best Friend	128	32.4	118	29.9	148	37.5	
French:							
Self	140	31.6	123	27.7	180	40.6	1.456 ^{ns}
Best Friend	124	27.9	132	29.7	188	42.3	
English:							
Self	80	25.0	80	25.0	159	49.8	4.624 ^{ns}
Best Friend	60	18.9	74	23.4	182	57.5	

ns - not significant at the 0.01 level of significance

TABLE XXXI
PARTICIPATION IN PHYSICAL ACTIVITY FOR CATHARSIS:
BEST FRIEND VERSUS SELF

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		Chi Square
	No.	%	No.	%	No.	%	
Males:							
Self	168	45.6	117	31.7	83	22.5	9.664*
Best Friend	129	35.3	152	41.6	84	23.0	
Females:							
Self	172	43.5	128	32.4	95	24.0	10.360*
Best Friend	128	32.4	157	39.8	109	27.6	
French:							
Self	193	43.3	130	29.2	122	27.4	6.128 ^{ns}
Best Friend	157	35.3	153	34.4	134	30.1	
English:							
Self	147	46.2	115	36.1	56	17.6	15.204*
Best Friend	100	31.7	156	49.5	59	18.7	

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

TABLE XXXII

PARTICIPATION IN PHYSICAL ACTIVITY AS AN ASCETIC EXPERIENCE:

BEST FRIEND VERSUS SELF

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		Chi Square
	No.	%	No.	%	No.	%	
Male:							
Self	119	32.5	109	29.7	138	37.7	0.096 ^{ns}
Best Friend	115	31.4	111	30.3	140	38.2	
Female:							
Self	69	17.5	82	20.8	243	61.6	5.288 ^{ns}
Best Friend	68	17.3	109	27.6	217	55.1	
French:							
Self	109	24.4	105	23.5	231	51.9	7.368 ^{ns}
Best Friend	116	26.1	135	30.4	193	43.4	
English:							
Self	79	25.0	86	27.3	150	47.6	1.612 ^{ns}
Best Friend	67	21.2	85	26.8	164	51.8	

ns - not significant at the 0.01 level of significance

TABLE XXXIII

PARTICIPATION IN PHYSICAL ACTIVITY AS GAMES OF CHANCE:
BEST FRIEND VERSUS SELF

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		Chi Square
	No.	%	No.	%	No.	%	
Males:							
Self	95	25.8	100	27.2	172	46.8	4.972 ^{ns}
Best Friend	100	27.3	122	33.4	143	39.1	
Females:							
Self	61	15.4	98	24.8	236	59.7	11.492 [*]
Best Friend	80	20.3	126	31.9	188	47.7	
French:							
Self	65	14.6	102	22.9	278	62.4	13.216 [*]
Best Friend	90	20.2	130	29.2	224	50.4	
English:							
Self	91	28.7	96	30.2	130	41.0	4.492 ^{ns}
Best Friend	90	28.5	118	37.4	107	33.9	

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significance

ficant for the female sub-population when compared with their best friend and for the total French sub-culture.

The most probable explanation of this is an extension of the discussion under health and fitness. All groups scored themselves higher than they scored their best friends for all of the other six subdomains (except French for vertigo and ascetic) while they all scored their best friends high for chance. This might suggest that they feel this category is not as socially acceptable as the others and perhaps indicated a "holier than thou" attitude.

Frequency of Television Viewing

The reader is cautioned that the results of this section may be more drastically affected by the opportunity to view the five types of activities analysed than by culture or sex. The population in the test area has the opportunity of viewing either a French language station or an English language television station. An actual program analysis of these stations was not made. Both stations did contain programs which fit into each of the five categories but such factors as the time slot of the program, number of programs, as well as the duration of the program run would have a large effect on the results.

Teen Dance Programs (Table XXXIV). Only 12.9 percent of the English viewed such programs at least once per week whereas 41.5 percent of the French said they watched teen dance every week. Females (34.0 percent) expressed a greater interest than males (24.8 percent) in viewing teen dance programs weekly.

Exercise and Fitness Programs (Table XXXV). The French (22.9 percent) viewed fitness programs more frequently than the English (10.0 percent). Of the males, 17.7 percent viewed such programs every week

TABLE XXXIV
FREQUENCY OF VIEWING TEEN DANCE PROGRAMS ON TELEVISION

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
1 French English	184	41.5	107	24.1	152	34.3	4	447
	41	12.9	79	24.9	197	62.1	2	319
<hr/>								
2 Male Female	91	24.8	95	25.9	180	49.1	5	371
	134	34.0	91	23.0	169	42.8	1	395

1 Chi Square = 82.27 (Significant at the 0.01 level of significance.)
2 Chi Square = 7.63 (Not significant at the 0.01 level of significance.)

TABLE XXXV
FREQUENCY OF VIEWING HEALTH AND FITNESS PROGRAMS ON TELEVISION

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
1 French English	102	22.9	156	35.0	187	42.0	2	447
	32	10.0	104	32.8	181	57.0	2	319
<hr/>								
2 Male Female	65	17.7	108	29.4	194	52.8	4	371
	69	17.4	152	38.4	174	44.0	0	395

1 Chi Square = 26.31 (Significant at the 0.01 level of significance.)
2 Chi Square = 7.63 (Not significant at the 0.01 level of significance.)

while 17.4 percent of the females fell in the same category.

Vertigo Activities (Table XXXVI). All groups expressed great interest in viewing these types of activities with less than 17.0 percent of each group indicating they watched these activities less than once per month on television.

Aesthetic Programs (Table XXXVII). In keeping with a more positive attitude toward physical activity as an aesthetic experience 29.6 percent of the female sub-population indicated that they viewed programs of an aesthetic type at least once per week whereas 14.7 percent of their male counterparts indicated that they viewed such programs.

College or Professional Sports (Table XXXVIII). As an indicator of the magnitude of the importance of professional and college sport in the life style of the male sample, it was noted that over 50.8 percent of all respondees watched programs which featured such activities "at least once per week." Some 29.7 percent of the female sample responded in a similar manner. Of the French sample, 38.9 percent weekly watched professional sport on television while 41.2 percent of the English did the same.

Frequency of Reading About Sports and Physical Activity

In Newspapers (Table XXXIX). Both English (56.4 percent) and males (55.3 percent) indicated they read about sports and physical activity more frequently (at least once per week) than French (40.6 percent) and females (39.7 percent).

In Magazines (Table XL). The English (36.3) read about sports more frequently than the French (23.0). The same was true for males (35.8) over females (21.6).

TABLE XXXVI

FREQUENCY OF VIEWING VERTIGO ACTIVITIES ON TELEVISION

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total	
	No.	%	No.	%	No.	%			
1	French	210	47.2	162	36.4	72	16.2	3	447
	English	145	45.7	133	41.9	39	12.3	2	319
2	Male	199	54.2	124	33.7	44	11.9	4	371
	Female	156	39.5	171	43.4	67	17.0	1	395

1 Chi Square = 3.47 (Not significant at the 0.01 level of significance.)

2 Chi Square = 16.52 (Significant at the 0.01 level of significance.)

TABLE XXXVII

FREQUENCY OF VIEWING AESTHETIC ACTIVITIES ON TELEVISION

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total	
	No.	%	No.	%	No.	%			
1	French	104	23.3	189	42.4	152	34.1	2	447
	English	67	21.2	136	43.0	113	35.7	3	319
2	Male	54	14.7	138	37.7	174	47.5	5	371
	Female	117	29.6	187	47.3	91	23.0	0	395

1 Chi Square = 0.54 (Not significant at the 0.01 level of significance.)

2 Chi Square = 55.55 (Significant at the 0.01 level of significance.)

TABLE XXXVIII

FREQUENCY OF VIEWING COLLEGE AND PROFESSIONAL SPORTS ON TELEVISION

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total
	No.	%	No.	%	No.	%		
1 French English	173	38.9	133	29.9	138	31.0	3	447
	130	41.2	112	35.5	73	23.1	4	319
<hr/>								
2 Male Female	186	50.8	105	28.6	75	20.4	5	371
	117	29.7	140	35.6	136	34.6	2	395

1 Chi Square = 6.18 (Not significant at the 0.01 level of significance.)

2 Chi Square = 37.43 (Significant at the 0.01 level of significance.)

TABLE XXXIX

FREQUENCY OF READING ABOUT SPORTS AND PHYSICAL ACTIVITY IN THE NEWSPAPER

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total	
	No.	%	No.	%	No.	%			
1	French	181	40.6	117	26.2	147	33.0	2	447
	English	179	56.4	66	20.8	72	22.7	2	319
<hr/>									
2	Male	203	55.3	73	19.8	91	24.7	4	371
	Female	157	39.7	110	27.8	128	32.4	0	395

1 Chi Square = 18.94 (Significant at the 0.01 level of significance.)
2 Chi Square = 18.60 (Significant at the 0.01 level of significance.)

TABLE XL

FREQUENCY OF READING ABOUT SPORTS AND PHYSICAL ACTIVITY
IN MAGAZINES AND BOOKS

	At Least Once Per Week		Once or Twice Per Month		Less Often or Never		No Response	Total	
	No.	%	No.	%	No.	%			
1	French	102	23.0	165	37.2	176	39.7	4	447
	English	114	36.3	118	37.5	82	26.1	5	319
<hr/>									
2	Male	131	35.8	128	35.0	106	29.0	6	371
	Female	85	21.6	155	39.5	152	38.7	3	395

1 Chi Square = 21.36 (Significant at the 0.01 level of significance.)
2 Chi Square = 19.63 (Significant at the 0.01 level of significance.)

Game Preference

The game preference data was collected by way of the Jensen-Glassford questionnaire for all groups. The analysis made here is identical with the analysis of the B.A.T. inventory.

Differences Among Sub-Populations

Physical Skill (Table XLI). A chi square analysis showed no significant difference at the 0.01 level of significance between any of the pairs of groups.

Strategy (Table XLII). A chi square analysis showed a significant difference for the French-English comparison at the 0.01 level of significance.

Chance (Table XLIII). A chi square analysis showed a significant difference for the French-English comparison at the 0.01 level of significance.

Discussion of Results

It was hypothesised that games of physical skill would be preferred by members of cultures wherein emphasis was on high achievement orientation in the child rearing process and that games of chance would be preferred by members of cultures in which obedience and high religious orientation were prominent in the socialization of the child. Games of strategy, it was suggested, are associated with culture complexity and obedience training.

A chi square analysis revealed a significant difference between French and English on the chance and strategy sections of the game pre-

ference inventory. This significant finding indicates that the response pattern of the French and English are different. It is, however, impossible to determine which of the two groups showed the greater preference for games of strategy or for games of chance as the means are extremely close, never differing by more than 0.03. What the chi square test indicates is that the distribution of scores are different. The French Canadians tend to be more extreme in their expressed preference for games of this type as compared with the English Canadians. The French scored higher than their English counterparts at both ends of the Likert scale. The more conservative English tended to respond more frequently around the neutral point on the Likert scale than the French.

It would appear that there are greater differences in child rearing practices between groups within each culture than there are between cultures. Ideally this game preference inventory should be supplemented with a suitable value orientation questionnaire. Within each culture the hypothesis may, in fact, be correct, but without the value orientation inventory there is no way of determining this. By using such a questionnaire, it might be possible to classify individuals according to their value orientation (how strongly are they materialistic, humanistic, et cetera). It would then be possible to test for significant difference between groups holding different value orientations on a game preference inventory. The conflict enculturation hypothesis may in fact hold true within each culture.

From the review of the literature it appears that as recently as fifteen or twenty years ago the French Canadian family was highly religiously oriented and obedience training was a major component of the child rearing process. In recent years there has been a drastic

shift to the more achievement oriented socialization process associated with the predominantly English business world. This shift may account for the fact that the French tended to outscore the English at either extreme on the three sections of the game preference inventory. In the initial stages of any rapid change there are usually those who reject the past and swing drastically in the direction of the change and those who reject the change and remain rigid with the old. In time the majority settle somewhere between the two extremes.

TABLE XLI
GAME PREFERENCE: GAMES OF PHYSICAL SKILL

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	176.5	40.0	140.0	31.7	62.3	14.8	45.0	10.2	14.8	3.3
English	110.0	34.8	112.0	35.4	60.0	19.0	29.0	9.2	5.0	1.6
Chi Square = 6.4221 ^{ns}										
French Female	86.0	37.4	74.8	32.5	37.0	16.1	23.3	10.1	8.8	3.8
French Male	90.5	42.8	65.3	30.9	28.3	13.4	21.8	10.3	6.0	2.8
Chi Square = 1.7637 ^{ns}										
English Female	54.3	33.7	57.5	35.8	31.0	19.3	14.5	9.0	3.0	1.9
English Male	55.8	35.9	54.5	35.0	29.0	18.6	14.5	9.3	2.0	1.3
Chi Square = 0.3028 ^{ns}										
Male	146.3	39.9	119.8	32.6	57.3	15.6	36.3	9.9	8.0	2.2
Female	140.0	35.9	132.3	33.9	68.0	17.4	37.8	9.7	11.8	3.0
Chi Square = 1.7439 ^{ns}										
Urban	43.0	45.3	31.0	32.6	12.5	13.2	9.0	9.5	1.5	1.6
Rural	44.3	36.3	48.8	40.0	16.5	13.5	12.3	10.0	5.0	4.1
Chi Square = 2.9985 ^{ns}										

ns - not significant at the 0.01 level of significance

TABLE XLII
GAME PREFERENCE: GAMES OF STRATEGY

	Positive		Neutral		Negative	
	1		2		3	
	No.	%	No.	%	No.	%
French	125.3	28.4	134.0	30.4	78.3	17.7
English	75.5	23.9	102.3	32.3	82.8	26.2
Chi Square = 12.4878*						
French Female	68.0	29.6	69.8	30.3	38.0	16.5
French Male	57.3	27.1	64.3	30.4	40.3	19.0
Chi Square = 1.3388 ^{ns}						
English Female	28.5	17.7	54.8	34.0	44.8	27.8
English Male	47.0	30.2	47.5	30.5	38.0	24.4
Chi Square = 7.4336 ^{ns}						
Male	104.3	28.4	111.8	30.4	78.3	21.3
Female	96.5	24.7	124.5	31.9	82.8	21.2
Chi Square = 1.9599 ^{ns}						
Urban	26.8	28.2	27.8	29.2	14.5	15.3
Rural	37.0	30.3	38.0	31.1	26.0	21.3
Chi Square = 3.7122 ^{ns}						

* - significant at the 0.01 level of significance

ns - Not significant at the 0.01 level of significance

TABLE XLIII
GAME PREFERENCE: GAMES OF CHANCE

	Positive				Neutral				Negative	
	1		2		3		4		5	
	No.	%	No.	%	No.	%	No.	%	No.	%
French	61.8	14.0	117.0	26.5	87.8	19.9	125.0	28.3	50.0	11.3
English	37.0	11.7	78.3	24.7	95.0	30.0	80.5	25.5	25.8	8.1
Chi Square = 11.2733*										
French Female	38.8	16.8	61.0	26.5	46.0	20.0	63.0	27.4	21.3	9.2
French Male	23.0	10.9	56.0	26.5	41.8	19.7	62.0	29.2	28.8	13.6
Chi Square = 4.8027 ^{ns}										
English Female	16.3	10.1	46.5	28.9	48.8	30.3	38.8	24.1	10.8	6.7
English Male	20.8	13.3	31.8	20.4	46.3	29.7	41.8	26.8	15.0	9.6
Chi Square = 4.1116 ^{ns}										
Male	43.8	11.9	87.8	23.9	88.0	24.0	103.8	28.3	43.8	11.9
Female	55.0	14.1	107.5	27.5	94.8	24.3	101.8	26.1	32.0	8.2
Chi Square = 4.6150 ^{ns}										
Urban	11.8	12.4	21.8	22.9	16.8	17.6	30.5	32.1	14.3	15.0
Rural	21.3	17.4	37.5	30.7	24.5	20.1	29.8	24.4	9.0	7.4
Chi Square = 6.3099 ^{ns}										

* - significant at the 0.01 level of significance

ns - not significant at the 0.01 level of significant

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The purpose of the study was to determine current attitudes towards and interests in physical activity and game preference of selected groups of secondary school students. The students were drawn from French schools in the Province of Quebec and English schools in the Province of Ontario. An attempt was made to seek an explanation for any cultural differences found in attitude towards physical activity or game preference. Seven hundred seventy-six secondary school students served as subjects for the main portion of the study. Of this total there were 233 French females, 214 French males, 162 English females, and 157 English males. The subjects were selected by class at random from grades ten and twelve. A sample of 217 grade eleven males and females were also selected for the purposes of urban-rural comparisons. These students were drawn from French schools in northwestern Quebec. All subjects responded to three inventories, two developed by Kenyon at the University of Wisconsin which were designed to obtain information concerning their attitudes towards and interests in physical activity, and one developed at The University of Alberta to measure game preference. The inventories required approximately forty minutes to complete. All subjects were tested during the month of May, 1970.

Chi square tests were applied to grouped data on attitude towards physical activity to determine any differences between the sub-populations. The seven subdomains concerning attitude towards physical activity were ranked by means for each of the four sub-populations. These four

subpopulations were French females, French males, English females and English males. A chi square analysis was also applied to the general information data. Responses to the three sections on the game preference inventory (namely those of strategy, physical skill, and chance) were also subjected to a chi square test. To reduce the possibility of incurring Type I errors, a relatively stringent 0.01 level of significance was established at the outset of this study.

One of the major researches that has been undertaken to date with reference to attitude towards and participation in physical activity has been that of Kenyon (1968c). This study was a compilation of research carried out in Canada, the United States, England and Australia and hence the results of the current study will be compared and contrasted with those reported by Kenyon.

It is of interest to note that results found in this study concerning the subdomain of social experience compare very favourably with those found by Kenyon. All groups in both studies expressed a very positive attitude towards this subdomain. When the two sub-cultures were examined, it was found that there were no differences between French or English attitudes on this parameter. The females showed a slightly more positive attitude than the males towards physical activity as a social experience. This finding was significant in the Kenyon study.

All groups expressed a very positive attitude towards the health and fitness aspect of physical activity. As with the previous subdomain the females scored higher than did the males, but this difference was only significant in the Kenyon study. The French Canadians scored higher than did the English Canadians on this subdomain, but not signifi-

cantly so. The Canadian and the U.S. samples indicated a more positive attitude towards health and fitness than did the English and the Australians.

In the third subdomain, that of vertigo, the means of all groups were just slightly above the neutral position. Cross-culturally there were no significant differences for this study. However, Kenyon reported that Canadian and English samples were significantly more positive than U.S. and Australian samples in expressed attitude toward this subdomain. Kenyon reported that males expressed a significantly greater interest in physical activity as pursuit of vertigo than did females. These findings are mirrored in this study, but the results are not statistically significant.

An analysis of the aesthetic subdomain yielded significant chi squares between male and female comparisons for both this and the Kenyon study. Females showed a much more positive attitude than males toward this subdomain. There were no differences between sub-cultures in this present study, but Kenyon reported that Canadian and English students tended to express a more positive attitude towards asthetic type activities than did the U.S. and Australian students.

All groups for both studies expressed a positive attitude towards physical activity as the release of tension. In the present study, seven percent more females expressed a high positive attitude towards this subdomain than did the males. These findings are mirrored in the study by Kenyon in which the females expressed a more positive attitude towards this subdomain than the males. Although English Canadians expressed a greater interest in this subdomain than did French Canadians, the finding is not significant. Canadian and English samples were significantly

higher in expressed attitude towards the subdomain of catharsis than were Australian and U.S. samples as reported by Kenyon.

An examination of the results on the ascetic subdomain for both studies indicated that all scores were around the neutral point. Although Kenyon found that all means clustered around the neutral point, the Canadian sample expressed the most positive attitude towards the ascetic subdomain while the Australian sample expressed the least positive. The French Canadian sample in the present sample indicated a more positive attitude than did the English sample, but these mathematical differences were not significant. The females tended to score lower on this subdomain than did the males in both studies, but the finding was only significant in the Kenyon study.

Of all the subdomains, that of chance was scored the lowest by participants in both this and the Kenyon study. In the latter study differences were reported among all countries with the U.S., English and Canadian students showing a more positive attitude than the Australian students. The present study yielded a significant chi square between French and English groups. The difference, however, was not the result of either group expressing a more positive attitude towards this subdomain, but rather due to the fact that the French Canadians tended to be much more extreme in their expression placing their responses more frequently at the extreme ends of the Likert scale whereas the English Canadians tended to score around the neutral point. Kenyon reported a significant difference between males and females with the males scoring higher. These findings were not paralleled in the present study which showed no significant difference for male-female comparisons.

Summing up this phase of the present study, it is safe to say

that all groups expressed favourable attitudes towards physical activity as a social experience, aesthetic experience, as a means for catharsis and for health and fitness. Less favourable attitudes were expressed towards physical activity as a pursuit of vertigo and as an ascetic experience. A negative attitude was expressed towards physical activity as games of chance. In ranking the seven subdomains by attitude, both French and English females ranked the aesthetic subdomain first whereas French males ranked health and fitness first and English males ranked catharsis first. Significant differences were found for the French-English comparison on the subdomain of chance and for the male-female comparison on the subdomain of aesthetic. These results compare quite favourably with those found by Kenyon.

In both the present study and that of Kenyon, all groups were asked to indicate the amount that they participated in physical activities from each of the seven subdomains. The three headings used to determine the amount of participation were: "at least once a week," "once per month," and "less often or never." All groups in both studies indicated that they participated very frequently in physical activity as a social experience. There were no differences between male and female participation in this subdomain. The results from the Kenyon study would indicate that there were no differences between students from the four different countries relative to participation in physical activity as a social experience. In the present study the English Canadians expressed a significantly greater participation rate than did the French Canadians in activities of a social nature. This difference was attributed to a greater opportunity for the English sub-population to engage in activi-

ties of this nature.

In examining the fitness element relative to participation, it was found that all groups rated participation extremely high in activities of this nature. In both studies seventy percent to eighty percent of the students stated that they engaged in activities perceived as being of positive value to health and fitness at least once per week. It must be pointed out that there is no way of determining the extent to which physical education programs contributed to these activities. Obviously, however, a large majority believe that they were participating in activities which had a health and fitness value. There were no cultural or sex differences found in examining the data for either this study or the Kenyon study.

Participation in vertiginous-like activities did not achieve as high a popularity rating as did fitness or socially oriented activities. In all studies to date, including the present one, a marked sex difference was found with fewer than twenty percent of the females participating weekly or oftener while the figures for the male population exceeded forty percent in the current study and approached forty percent in the Kenyon study. It was noted in the present study that the English Canadians indicated a greater participation in activities associated with this subdomain than did the French Canadians. Kenyon, on the other hand, reported that of the four nationalities he examined, the U.S. students indicated the greatest participation rate in this subdomain.

In the current study, it was noted that the females indicated a much higher participation rate in activities of an aesthetic nature than did their male counterparts. A similar finding was noted by Kenyon, et al. Although the results were not statistically significant the French

Canadians indicated a numerically slightly greater participation rate in this subdomain than did the English Canadians. U.S. students scored highest and Canadian students lowest in participation in activities of an aesthetic nature according to Kenyon.

The majority of students, when examined on participation in activities which provide relief from tension, indicated that they participated at least once a week. While Kenyon reported no national or sex differences in expressed participation towards cathartic-type activities, the present study found that English Canadians expressed a significantly greater participation than did French Canadians.

Participation in ascetic-type activities was less popular than other forms of participation among the female samples in both the Kenyon and the present study. No national differences were found in the Kenyon study and no sub-cultural differences were found in the present study concerning participation in this subdomain. In both studies males showed a significantly greater participation in physical activity as prolonged and strenuous training than did females.

The subdomain of chance ranked lowest in participation for all groups in both studies. In the present study the English and male groups indicated a significantly greater participation in physical activity as games of chance than did the French and female groups. Kenyon also found males expressed a greater participation than females in games of chance.

To summarize, the results of this study indicate that all groups tested rank health and fitness first among the seven subdomains by participation. Very little participation was indicated by any of the groups in the subdomains of vertigo, aesthetic, chance, and ascetic. Significant chi square values were found for the French-English comparison in the

subdomains of social experience, catharsis, and chance whereas significant chi square were found for the male-female comparison for the subdomains of aesthetic, ascetic and chance. These results compare very favourably with the work done by Kenyon cross-nationally between school populations in England, the United States, Canada, and Australia.

Attitude towards physical activity was plotted against participation in physical activity for each of the seven subdomains. It was noted that for all subdomains with the exception of health and fitness there was a noticeable participation lag. This participation lag was most evident in the subdomain of aesthetic for both English and French females. Over eighty percent of the females expressed a positive attitude towards the subdomain of physical activity as the beauty of human movement and yet only slightly over forty percent of that same group said that they participated in activities of this nature at least once per week. This participation lag was also evident from the results of the ranking of the seven subdomains by participation when compared with the ranking of the seven subdomains by attitude scores. For both female groups, the aesthetic subdomain ranked first by attitude scores and yet it ranked only fourth on the participation inventory. Similar differences were noted for English males who ranked catharsis first by attitude and yet third by participation. The subdomain of health and fitness ranked first for all groups by participation and yet in looking at the attitude scores, it ranked as low as fourth for some of the groups. It is evident from these results that students in the test area are not receiving the variety of physical activities that they desire. It is the purpose of physical education programs to educate the students for adequate and constructive use of their leisure time. It is realized that school

physical education programs are not the only avenue for participation in physical activity, however, with the present state of other facilities in the test area, the major load and responsibility for these programs must fall on the schools. It is hoped that this study will provide constructive feedback to the school systems in the test area towards the possible redirection of physical education programs.

The general information inventory indicated that females scored higher and were very interested in that which involves other people and that which is beautiful. The males, on the other hand, scored higher on the interest in politics question. When subjects were asked to indicate their best friend's participation in each of the seven subdomains concerning attitude towards physical activity they all tended to score themselves higher than they scored their best friends on those subdomains which they considered to be important. The French sample indicated that they watched teen dance and exercise television programs more frequently than did the English sample. All groups expressed a great interest in viewing activities of the vertiginous variety on television. The females showed a greater interest in viewing aesthetic type television programs than did the males. The males, however, indicated a greater frequency of television viewing of college or professional sports as well as a greater propensity to read about physical activities in sports newspapers and magazines more frequently than did the females. The same was true for the English who read about sports more frequently than the French.

A subsidiary purpose of this study was to examine the conflict-enculturation theory as outlined by Roberts and Sutton-Smith. It was hypothesized that games of physical skill would be preferred by those members of a culture emphasizing high achievement orientation in the

child-rearing process and would be preferred by boys over girls. It is also hypothesized that games of strategy were associated with culture complexity and would be preferred by students whose parents had emphasized high obedience-type training in child-rearing. Games of chance, it was suggested, were associated with high religious orientation and obedience-type training during the child-rearing process and would be preferred by members of cultures who emphasize these traits and also by girls over boys. The results of this study indicate that all groups showed a greater preference for games of physical skill than for games of strategy and chance. There were significant chi square differences between French and English on games of chance and strategy. These differences were not due to a greater interest shown by either group in these categories, but rather due to differences in distributions of the scores. The French tended to be much more extreme than the English in their views towards these two subdomains and on the five point Likert scale they outscored the English at both extremes whereas the English scored higher than the French around the neutral point.

From a review of the literature it appears fairly evident that the French Canadian culture at one time did emphasize the elements of high obedience training and high religious orientation in the early socialization of the child. From this review it would be expected that members of the French culture would prefer games of chance over games of physical skill. The reverse, it was hypothesized, would be true for the English culture. For possibly several reasons, among them the drastic changes in the social organization system and the role of the church within the Province of Quebec, these results did not coincide with the conjectured outcome.

There were no differences for the male-female comparison for any of the three categories of games. It was also hypothesized that there would be differences between male and female game preferences with the females showing a greater preference for games of chance and the males for games of physical skill. One of the primary reasons for making such a hypothesis was that it was assumed that females received a much more obedience-type and routine responsibility-type training in their early childhood than did the males. It was assumed that the males, because of their occupational role in society, would receive a more achievement-oriented child-rearing background than their female counterparts. If the conflict-enculturation hypothesis is true then it would appear that in modern day society these assumptions do not hold true. It seems that there are greater divergences in child-rearing processes within each culture than there are between cultures or sexes. What is needed is an instrument to be combined with the game preference inventory which will enable the researcher to sort out those individuals who have received a similar socialization process in early childhood. By grouping individuals from the same child-rearing background it will be possible to test the conflict-enculturation theory within each culture.

Conclusions

1. The expressed attitude of all sub-cultures studied towards physical activity as generally favourable.
2. French and English differences are not as great as those between the sexes within each culture.
3. There was an expression of the desire to participate in a greater variety of activities.

4. The subdomain of chance is under some question and should be reconsidered.
5. The aesthetic subdomain should be re-examined to include a more obvious indication of the element of competition.
6. Females are extremely interested in the aesthetic phases of physical activity and yet little evidence was given to indicate that these needs are being met in present physical education programs.
7. The game preference inventory has little explanatory value without the additional information of a value orientation inventory.
8. With the exception of health and fitness, there is a large gap between attitudes expressed towards a subdomain and participation in activities from that subdomain.

Recommendations

1. A value orientation questionnaire should be given to the same population to help explain some of the cultural differences found.
2. The Jensen-Glassford questionnaire should be used, along with a suitable value orientation inventory, towards the development of a valid game preference measurement tool.
3. The validity of the responses obtained in this study could be evaluated by means of a follow-up interview.
4. The school physical education program should be studied prior to giving the attitude scale so that more accurate recommendations can be made following the study.

Recommendations for Physical Education Programs

1. A greater variety of physical activities should be offered in physical education programs.
2. The possibility of elective activities in physical education programs should be considered.
3. The women's physical education program should be re-examined to include more aesthetic-type activities.
4. There should be a constant evaluation of student needs and wants in comparison to what the program is actually providing.

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APPENDICES

APPENDIX A

TEST INVENTORIES AND INSTRUCTIONS

(SAMPLE)
(Do Not Mark This Page)

B.A.T. (rev.)
3/30/66

INSTRUCTIONS
(using direct response)

SEM. D. SCALES of ATPA and BI

(Project M)

The purpose of this inventory is to measure the meaning for you of certain concepts of physical activity by judging them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you. On each page of the booklet you will find a different idea or concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order in which they are given.

Here is how you are to use these scales:

If you feel that the concept in the box at the top of the page, for example "REFEREE," is very closely related to one end of the scale, you should place your check-mark (on the answer sheet provided) as follows:

Question	Answer
fair _____: _____: _____: _____: _____: unfair	<div>↓</div> <div>== == == ==</div>
	or
	<div>== == == == ↓</div>

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

Question	Answer
fair _____: _____: _____: _____: _____: unfair	<div>↓</div> <div>== == == ==</div>
	or
	<div>== == ↓ ==</div>

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing you are judging. If you consider the concept to be neutral on the scale (that is, both sides of the scale seem equally associated with the concept), or if the scale makes no sense (that is, it is unrelated to the concept), then you should place your check-mark in the middle space:

Question	Answer
safe _____: _____: _____: _____: _____: dangerous	== == == == ==

IMPORTANT

- (1) Be sure you check every scale for every concept--
do not omit any.
- (2) Never put more than one mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked a similar item earlier in the test. Make each item a separate and independent judgement. Work at a fairly high speed through the test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless because we want your true impressions.

PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE

Sports, games and other forms of physical recreation whose primary purpose is to provide opportunities for social participation; that is, to meet new people and continue personal friendships.

As you proceed, always be thinking about the idea or concept in the box.

1. good : : : : : bad
 1 2 3 4 5
2. worthless : : : : : worthwhile
 1 2 3 4 5
3. pleasant : : : : : unpleasant
 1 2 3 4 5
4. sour : : : : : sweet
 1 2 3 4 5
5. nice : : : : : awful
 1 2 3 4 5
6. sad : : : : : happy
 1 2 3 4 5
7. clean : : : : : dirty
 1 2 3 4 5
8. relaxed : : : : : tense
 1 2 3 4 5

PHYSICAL ACTIVITY FOR HEALTH AND FITNESS

Participating in physical activity
primarily to improve one's health
and physical fitness.

9. good : : : : : bad
 1 2 3 4 5
10. worthless : : : : : worthwhile
 1 2 3 4 5
11. pleasant : : : : : unpleasant
 1 2 3 4 5
12. sour : : : : : sweet
 1 2 3 4 5
13. nice : : : : : awful
 1 2 3 4 5
14. sad : : : : : happy
 1 2 3 4 5
15. clean : : : : : dirty
 1 2 3 4 5
16. relaxed : : : : : tense
 1 2 3 4 5

PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK

Physical activities providing, at some risk to the participant, thrills and excitement through speed, acceleration, sudden change of direction, and exposure to dangerous situations.

17. good : : : : : bad
 1 2 3 4 5
18. worthless : : : : : worthwhile
 1 2 3 4 5
19. pleasant : : : : : unpleasant
 1 2 3 4 5
20. sour : : : : : sweet
 1 2 3 4 5
21. nice : : : : : awful
 1 2 3 4 5
22. sad : : : : : happy
 1 2 3 4 5
23. clean : : : : : dirty
 1 2 3 4 5
24. relaxed : : : : : tense
 1 2 3 4 5

PHYSICAL ACTIVITY AS THE BEAUTY IN HUMAN MOVEMENT

Physical activities which are thought of as possessing beauty or certain artistic qualities such as ballet, gymnastics or figure skating.

25. good : : : : : bad
 1 2 3 4 5
26. worthless : : : : : worthwhile
 1 2 3 4 5
27. pleasant : : : : : unpleasant
 1 2 3 4 5
28. sour : : : : : sweet
 1 2 3 4 5
29. nice : : : : : awful
 1 2 3 4 5
30. sad : : : : : happy
 1 2 3 4 5
31. clean : : : : : dirty
 1 2 3 4 5
32. relaxed : : : : : tense
 1 2 3 4 5

PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION

The participation (or watching others participate) in physical activities to get away from the problems of modern living; to provide a release from "pent up emotions."

33. good : : : : : bad
 1 2 3 4 5
34. worthless : : : : : worthwhile
 1 2 3 4 5
35. pleasant : : : : : unpleasant
 1 2 3 4 5
36. sour : : : : : sweet
 1 2 3 4 5
37. nice : : : : : awful
 1 2 3 4 5
38. sad : : : : : happy
 1 2 3 4 5
39. clean : : : : : dirty
 1 2 3 4 5
40. relaxed : : : : : tense
 1 2 3 4 5

PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING

Physical activities which require long periods of strenuous and often painful training; which involve stiff competition and demands that the individual give up a number of pleasures for a period of time.

41. good _____ : _____ : _____ : _____ : _____ : bad
42. worthless _____ : _____ : _____ : _____ : _____ : worthwhile
43. pleasant _____ : _____ : _____ : _____ : _____ : unpleasant
44. sour _____ : _____ : _____ : _____ : _____ : sweet
45. nice _____ : _____ : _____ : _____ : _____ : awful
46. sad _____ : _____ : _____ : _____ : _____ : happy
47. clean _____ : _____ : _____ : _____ : _____ : dirty
48. relaxed _____ : _____ : _____ : _____ : _____ : tense

PHYSICAL ACTIVITY AS GAMES OF CHANCE

Games and sports where chance
and luck are more important than
skill in determining the winner,
such as dice and horse racing.

49. good : : : : : bad
 1 2 3 4 5
50. worthless : : : : : worthwhile
 1 2 3 4 5
51. pleasant : : : : : unpleasant
 1 2 3 4 5
52. sour : : : : : sweet
 1 2 3 4 5
53. nice : : : : : awful
 1 2 3 4 5
54. sad : : : : : happy
 1 2 3 4 5
55. clean : : : : : _dirty
 1 2 3 4 5
56. relaxed : : : : : tense
 1 2 3 4 5

GENERAL INFORMATION INVENTORY

(Project M)

INSTRUCTIONS

The purpose of this inventory is to find out about your various interests and activities. For each question write in the answer or mark the box that would be best for you.

EXAMPLE

	At least once per week	Once or twice per month	Less often or never
On the average, how often do you eat carrots?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The example shows how you would answer if, on the average, you eat carrots at least once each week.

Answer each question after reading it carefully. Choose the answer that is nearest to describing your interests or activities.

1. How interested are you in each of the following?

		AMOUNT OF INTEREST		
		Very Much	Some	Little or None
(a)	<u>Theoretical Matters.</u> The discovery of truth, the use of logic and careful judgements as in science and philosophy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				1
(b)	<u>That which is practical and useful.</u> The manufacturing and selling of goods and products to make money. The work of the business man.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				2
(c)	<u>That which is beautiful.</u> The importance of form and harmony as in various forms of art. The creative, individualistic person.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				3

(d)	That which involves <u>other people</u> . The unselfish liking and helping of other persons to develop warm friendships.	Very Much ____ ____	Some ____ ____	Little or None ____ ____	4
(e)	<u>Politics</u> . The interest in per- sonal success, power, influence and esteem.	Very Much ____ ____	Some ____ ____	Little or None ____ ____	5
(f)	<u>Religious Matters</u> . The mysteries of life. The meaning of life in this and other worlds.	Very Much ____ ____	Some ____ ____	Little or None ____ ____	6

2. Interest in Physical Activity. We have classified physical activity into seven types. They will be familiar to you from a previous inventory. They are as follows:

- (a) PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE. Sports, games, and other forms of physical recreation whose primary purpose is to provide opportunities for social participation; that is, to meet new people and continue personal friendships.
- (b) PHYSICAL ACTIVITY FOR HEALTH AND FITNESS. Participating in physical activity primarily to improve one's health and physical fitness.
- (c) PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK. Physical activities providing, at some risk to the participant, thrills and excitement through speed, acceleration, sudden change of direction, and exposure to dangerous situations.
- (d) PHYSICAL ACTIVITY AS THE BEAUTY IN HUMAN MOVEMENT. Physical activities which are thought of as possessing beauty or certain artistic qualities such as ballet, gymnastics, or figure skating.
- (e) PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION. The participation (or watching others participate) in physical activities to get away from the problems of modern living; to provide a release from "pent up emotions."
- (f) PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING. Physical activities which require long periods of strenuous and often painful training; which involve stiff competition and demands that the individual give up a number of pleasures for a period of time.

- (g) PHYSICAL ACTIVITY AS GAMES OF CHANCE. Games and sports where chance and luck are more important than skill in determining the winner, such as throwing dice or betting on horses or dogs.

2A. How often do you actually take part in physical activities that are best described by one or more of the following categories? (when in season). Mark one box in each row.

	At least once per week	Once or twice per month	Less often or never	
(a) PHYSICAL ACTIVITY AS A SOCIAL EXPERI- ENCE	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	7
(b) PHYSICAL ACTIVITY FOR HEALTH AND FITNESS	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	8
(c) PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	9
(d) PHYSICAL ACTIVITY AS THE BEAUTY IN MOVEMENT	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	10
(e) PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	11
(f) PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TRAINING	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	12
(g) PHYSICAL ACTIVITY AS GAMES OF CHANCE	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	13

2B. Now, thinking of your best friends, on the average, how often do they actually take part (when in season)? Mark one box in each row on the answer sheet.

	At least once per week	Once or twice per month	Less often or never	
(a) PHYSICAL ACTIVITY AS A SOCIAL EXPERIENCE	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	14
(b) PHYSICAL ACTIVITY FOR HEALTH AND FITNESS	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	15

	At least once per week	Once or twice per month	Less often or never	
(c) PHYSICAL ACTIVITY AS A THRILL BUT INVOLVING SOME RISK	____ ____	____ ____	____ ____	16
(d) PHYSICAL ACTIVITY AS THE BEAUTY IN HUMAN MOVEMENT	____ ____	____ ____	____ ____	17
(e) PHYSICAL ACTIVITY FOR THE RELEASE OF TENSION	____ ____	____ ____	____ ____	18
(f) PHYSICAL ACTIVITY AS PROLONGED AND STRENUOUS TENSION	____ ____	____ ____	____ ____	19
(g) PHYSICAL ACTIVITY AS GAMES OF CHANCE	____ ____	____ ____	____ ____	20

3. How often do you watch each of the following types of physical activity on television?

	At least once per week	Once or twice per month	Less often or never	
(a) Teen dance programmes	____ ____	____ ____	____ ____	21
(b) Exercise and physical fitness programmes	____ ____	____ ____	____ ____	22
(c) Special sports events showing dangerous and thrilling sports	____ ____	____ ____	____ ____	23
(d) Programmes showing the beauty of human move- ment (gymnastics, fancy diving, etc.)	____ ____	____ ____	____ ____	24
(e) College or professional sports	____ ____	____ ____	____ ____	25

4. How often do you read about sports and physical activity in the newspaper?

5. How often do you read about sports and physical activity in magazines and books?

____ ____	____ ____	____ ____	26
____ ____	____ ____	____ ____	27

	Two or more	One	None	
6. To how many clubs or organiza- tions (outside of school) sponsoring sports or physical activity do you belong?	____ ____	____ ____	____ ____	28
7. Is there a television set in your home?	____ ____	____ ____	____ ____	29

Read over the following twelve questions very carefully and mark your preference. The games given in brackets () are only two examples of games in that category. You are not stating a preference for that game but for that type of game.

1. How much enjoyment do you get from games of physical skill
(such as swimming and gymnastics) where you have to use
skill and strength in order to do well?

A great deal	Quite a bit	Not sure	Not much	None at all
==	==	==	==	==

2. When you were in elementary school how much did you like games
of physical skill (such as swimming and gymnastics) where you
had to be fast or well co-ordinated to do well?

A great deal	Quite a bit	Neutral	Not much	None at all
==	==	==	==	==

3. When you were in grade seven, eight, or nine how much did you
play games of physical skill (such as swimming and gymnastics)
where in order to be good you have to be aggressive and train hard?

Very frequently	Frequently	Occasionally	Seldom	Never
==	==	==	==	==

4. If you had the ability to play any game of physical skill, games
(such as swimming and gymnastics) where in order to win you have
to be fairly well co-ordinated and strong, how much would you like
to play such games?

Very much	Quite a bit	Undecided	Not much	Not at all
==	==	==	==	==

5. How much enjoyment do you get from games of strategy where you have to outwit or outthink your opponent? (Two examples of such games are chess and checkers.)

A great deal	Quite a bit	Not sure	Not much	None at all
==	==	==	==	==

6. When you were in elementary school how much did you like games of strategy (such as chess and checkers) where you had to decide among several possible courses of action and outhink your opponent to win?

Very much	Quite a bit	Neutral	Not much	Not at all
==	==	==	==	==

7. When you were in grade seven, eight, or nine how often did you play games of strategy (such as chess and checkers) where you don't have to be lucky or strong but just have to outhink or outwit your opponent to win?

Very frequently	Frequently	Occasionally	Seldom	Never
==	==	==	==	==

8. If you had the ability, how much would you like to play games of strategy (such as chess and checkers) where, in order to win, you have to make clever decisions and outwit your opponent?

Very much	Quite a bit	Undecided	Not much	Not at all
==	==	==	==	==

9. How much enjoyment do you get from games of chance (such as Bingo and dice) where the outcome is determined by good luck?

A great deal	Quite a bit	Not sure	Not much	None at all
==	==	==	==	==

10. When you were in elementary school how much did you like games of chance (such as Bingo and dice) where the result of the game was not known until the very end as luck played an important role?

Very much	Quite a bit	Neutral	Not much	Not at all
==	==	==	==	==

11. When you were in grade seven, eight, or nine how often did you play games of chance (such as Bingo and dice) where a player didn't have to be strong, fast or powerful but just lucky?

Very frequently	Frequently	Occasionally	Seldom	Never
==	==	==	==	==

12. If you knew how to play any game of chance at all, games (such as Bingo and dice) where there is an element of fate and luck which determines who wins, how much would you like to play them?

Very much	Quite a bit	Undecided	Not much	Not at all
==	==	==	==	==

(EXEMPLE)
(N'écrivez pas sur cette page)

INSTRUCTIONS
(en se servant d'une réponse directe)

SEM.D. ECHELLES de ATPA et BI

(Projet M)

Le but de cet inventaire est de mesurer la signification pour vous de certains concepts de l'activité physique en les jugeant après une série d'échelles descriptives. En participant dans cet examen, veuillez rendre vos jugements en vous basant sur ce que ces activités signifient pour vous. Sur chaque page du livret vous trouverez une idée ou concept différent à juger et en bas de chacune se trouve une série de formules. C'est à vous d'évaluer le concept d'après chacune de ces échelles dans l'ordre qu'elles sont présentées.

Voici comment vous devez vous servir de ces échelles.

Si vous pensez que le concept dans la boîte en haut de la page, par exemple, L'ARBITRE est très étroitement apparenté à un bout de l'échelle vous devez placer votre dix comme suivant:

Question	Réponse
juste $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : $ injuste	== == == == ==
	ou
	== == == == ==

Si vous considérez que le concept est assez étroitement apparenté à l'un ou l'autre bout de l'échelle (mais pas extrêmement) vous devez placer votre dix ainsi:

Question	Réponse
juste $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : $ injuste	== == == == ==
	ou
	== == == == ==

La direction dans laquelle vous indiquez, naturellement, dépend sur lequel des deux bouts de l'échelle vous semble le plus caractéristique de ce que vous jugez. Si vous considérez le concept d'être neutre sur l'échelle (c'est-à-dire, les deux côtés de l'échelle vous paraissent également associés au concept) ou si l'échelle vous paraît sans sens (c'est-à-dire, elle est sans rapport avec le concept) vous devez alors indiquer votre dix dans l'espace au milieu.

Question	Réponse
Sauf ___: ___: ___: ___: ___: dangereux	== == == == ==

IMPORTANT:

- 1) Veuillez indiquer chaque échelle de chaque concept. N'en oubliez pas.
- 2) Ne mettre jamais plus qu'un dix sur une seule échelle.

Parfois vous pouvez sentir comme si vous avez eu le même article d'avance dans l'examen. Ce ne sera pas le cas alors ne cherchez pas entre les articles. N'essayez pas de vous rappeler comment vous avez répondu à un article pareil tout au début de l'examen. Faites de chaque article un jugement détaché et indépendant. Travaillez à une vitesse assez rapide pendant tout l'examen. Ne vous inquiétez pas selon des articles individuels. C'est votre première impression, vos "sentiments" immédiats au sujet des articles que nous voulons. Par contre, s'il vous plaît, ne soyez pas insouciant parce que nous voulons vos vraies impressions.

L'ACTIVITE PHYSIQUE COMME EXPERIENCE SOCIALE

Les sports, les jeux et les autres formes de récréation physique dont le but principal est de fournir des opportunités à la participation sociale; c'est-à-dire, de rencontrer de nouvelles personnes et de continuer les amitiés personnelles.

A mesure que vous avancez, pensez toujours à l'idée ou au concept dans la boîte.

- | | | | | | | | | | | | |
|----------------|-------|---|-------|---|-------|---|-------|---|-------|---|-------------------|
| 1. bon | _____ | : | _____ | : | _____ | : | _____ | : | _____ | : | mauvais |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 2. sans valeur | _____ | : | _____ | : | _____ | : | _____ | : | _____ | : | qui vaut la peine |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 3. agréable | _____ | : | _____ | : | _____ | : | _____ | : | _____ | : | désagréable |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 4. aigre | _____ | : | _____ | : | _____ | : | _____ | : | _____ | : | sucré |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 5. gentil | _____ | : | _____ | : | _____ | : | _____ | : | _____ | : | vilain |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 6. triste | _____ | : | _____ | : | _____ | : | _____ | : | _____ | : | joyeux |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 7. propre | _____ | : | _____ | : | _____ | : | _____ | : | _____ | : | sale |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 8. relaxé | _____ | : | _____ | : | _____ | : | _____ | : | _____ | : | tendu |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |

L'ACTIVITE PHYSIQUE POUR LA SANTE ET LA FORME

Participant dans les activités physiques
d'abord pour améliorer sa santé et sa
forme.

9. bon	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	mauvais
	1		2		3		4		5		
10. sans valeur	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	qui vaut la peine
	1		2		3		4		5		
11. agréable	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	désagréable
	1		2		3		4		5		
12. aigre	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	sucré
	1		2		3		4		5		
13. gentil	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	vilain
	1		2		3		4		5		
14. triste	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	joyeux
	1		2		3		4		5		
15. propre	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	sale
	1		2		3		4		5		
16. relaxé	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	<u> </u>	:	tendu
	1		2		3		4		5		

L'EDUCATION PHYSIQUE COMME UNE ACTIVITÉ
PASSIONNANTE MAIS ENTRAÎNANT UN CERTAIN
RISQUE

Les activités physiques qui fournissent,
avec un certain risque au participant, la
passion et la surexcitation de la vitesse,
de l'accélération, des changements abruptes
de direction et de l'exposition aux situa-
tions dangereuses.

- | | | | | | | | | | | | |
|-----------------|---------------|---|---------------|---|---------------|---|---------------|---|---------------|---|-------------------|
| 17. bon | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | mauvais |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 18. sans valeur | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | qui vaut la peine |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 19. agréable | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | désagréable |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 20. aigre | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | sucré |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 21. gentil | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | vilain |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 22. triste | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | joyeux |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 23. propre | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | sale |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 24. relaxé | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | tendu |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |

L'ACTIVITE PHYSIQUE COMME BEAUTE DU MOUVEMENT HUMAIN

Les activités physiques qui sont considérées comme possesseurs de beauté ou de certaines qualités artistiques comme le ballet, la gymnastique ou le patinage de fantaisie.

25. bon : : : : : mauvais
 1 2 3 4 5
26. sans valeur : : : : : qui vaut la peine
 1 2 3 4 5
27. agréable : : : : : désagréable
 1 2 3 4 5
28. aigre : : : : : sucré
 1 2 3 4 5
29. gentil : : : : : vilain
 1 2 3 4 5
30. triste : : : : : joyeux
 1 2 3 4 5
31. propre : : : : : sale
 1 2 3 4 5
32. relaxé : : : : : tendu
 1 2 3 4 5

L'ACTIVITE PHYSIQUE POUR LA LIBERATION
DE LA TENSION

La participation (ou regarder les autres participant)
dans les activités physiques pour éviter les problè-
mes de la vie moderne et pour fournir un élargissement
aux émotions étouffées.

- | | | | | | | | | | | | | |
|-----|-------------|---------------|---|---------------|---|---------------|---|---------------|---|---------------|---|----------------------|
| 33. | bon | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | mauvais |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 34. | sans valeur | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | qui vaut la
peine |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 35. | agréable | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | désagréable |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 36. | aigre | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | sucré |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 37. | gentil | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | vilain |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 38. | triste | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | joyeux |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 39. | propre | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | sale |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 40. | relaxé | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | tendu |
| | | 1 | | 2 | | 3 | | 4 | | 5 | | |

L'ACTIVITE PHYSIQUE COMME ENTRAÎNEMENT
PROLONGE ET ARDENT

Les activités physiques qui requièrent de longues périodes d'ardent et souvent pénible entraînement qui engagent la concurrence forte et demandent que l'individu renonce à un nombre de plaisirs pendant une période de temps.

- | | | | | | | | | | | | |
|-----------------|---------------|---|---------------|---|---------------|---|---------------|---|---------------|---|-------------------|
| 41. bon | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | mauvais |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 42. sans valeur | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | qui vaut la peine |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 43. agréable | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | désagréable |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 44. aigre | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | sucré |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 45. gentil | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | vilain |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 46. triste | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | joyeux |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 47. propre | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | sale |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |
| 48. relaxé | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | <u> </u> | : | tendu |
| | 1 | | 2 | | 3 | | 4 | | 5 | | |

L'ACTIVITE PHYSIQUE COMME DES JEUX DE CHANCE

Les jeux et les sports où le hasard et la chance sont plus importants que l'habileté en décidant du gagant, comme les dés ou les courses de chevaux.

49. bon : : : : : mauvais
 1 2 3 4 5
50. sans valeur : : : : : qui vaut la
 1 2 3 4 5 peine
51. agréable : : : : : désagréable
 1 2 3 4 5
52. aigre : : : : : sucré
 1 2 3 4 5
53. gentil : : : : : vilain
 1 2 3 4 5
54. triste : : : : : joyeux
 1 2 3 4 5
55. propre : : : : : sale
 1 2 3 4 5
56. relaxé : : : : : tendu
 1 2 3 4 5

INVENTAIRE DE L'INFORMATION GENERALE

(Projet M)

INSTRUCTIONS

Le but de cette inventaire est de découvrir vos intérêts et activités variés. Si vous regardez les questions maintenant vous verrez que des boîtes ou espaces sont donnés pour vos réponses. Pour chaque question écrivez la réponse ou indiquez la boîte qui vous servirait le mieux.

EXEMPLE

	Au moins une fois par semaine	Une ou deux fois par mois	Moins souvent ou jamais
En moyenne, combien de fois mangez-vous des carottes?	<u> </u>	<u> </u>	<u> </u>

L'exemple indique comment vous répondriez si, en moyenne, vous mangez les carottes au moins une fois par semaine.

Répondez à chaque question après l'avoir lue soigneusement. Choisissez la réponse qui est la plus près de décrire vos intérêts et vos activités.

-
1. Comment vous intéressez-vous dans chacun des cas suivants? Pour chaque question, écrire un X dans la meilleure boîte pour vous.

	DEGRE D'INTERET			
	beaucoup	un peu	peu ou pas du tout	
a) <u>Les matières théoriques.</u> La découverte de la vérité, l'usage de la logique et les jugements soigneux comme dans la science et la philosophie.	<u> </u>	<u> </u>	<u> </u>	1
b) <u>L'utile et le pratique.</u> Le manufacturier et la vente des marchandises et des produits pour gagner de l'argent. Le travail d'un homme d'affaires.	<u> </u>	<u> </u>	<u> </u>	2

- | | beaucoup | un peu | peu ou pas du tout. | |
|---|----------|--------|---------------------|---|
| c) <u>Le beau.</u> L'importance de la forme et de l'harmonie comme dans les formes variées de l'art. La personne créatrice et individualiste. | — | — | — | 3 |
| d) <u>L'engagement des autres.</u> Le goût désintéressé et l'aide aux autres personnes en développant des vives amitiés. | — | — | — | 4 |
| e) <u>La politique.</u> L'intérêt dans le succès personnel, le pouvoir, l'influence et l'estime. | — | — | — | 5 |
| f) <u>Les affaires religieuses.</u> Les mystères de la vie. Le sens de la vie dans ce monde et les autres. | — | — | — | 6 |
2. L'intérêt dans l'activité physique. Nous avons classifié l'activité physique dans sept genres. Ils vous seront déjà connus par un inventaire préalable. Ils sont comme suit:
- L'ACTIVITE PHYSIQUE COMME UNE EXPERIENCE SOCIALE.
Les sports, les jeux, et d'autres formes de la récréation physique dont le but principal est de fournir les opportunités à la participation sociale; c'est-à-dire, de rencontrer de nouvelles personnes et de continuer les amitiés personnelles.
 - L'ACTIVITE PHYSIQUE POUR LA SANTE ET LA FORME.
Participant dans les activités physiques d'abord pour améliorer sa santé et sa forme.
 - L'ACTIVITE PHYSIQUE COMME UN FRISSON MAIS ENTRAÎNANT UN CERTAIN RISQUE. Les activités physiques qui fournissent, avec un certain risque au participant, les frissons et la surexcitation de la vitesse, de l'accélération, des changements abruptes de direction et de l'exposition aux situations dangereuses.
 - L'ACTIVITE PHYSIQUE COMME LA BEAUTÉ DU MOUVEMENT HUMAIN. Les activités physiques qui sont considérées comme possesseurs de beauté ou de certaines qualités artistiques comme le ballet, la gymnastique, ou le patinage de fantaisie.

- e) L'ACTIVITE PHYSIQUE POUR LA LIBERATION DE LA TENSION. La participation (ou regarder les autres participer) dans les activités physiques pour éviter les problèmes de la vie moderne et pour fournir un élargissement aux émotions étouffées.
- f) L'ACTIVITE PHYSIQUE COMME ENTRAÎNEMENT PROLONGÉ ET ARDENT. Les activités physiques qui requièrent de longues périodes d'ardent et souvent pénible entraînement qui engagent la concurrence forte et demandent que l'individu renonce à un nombre de plaisirs pendant une période de temps.
- g) L'ACTIVITE PHYSIQUE COMME DES JEUX DE CHANCE. Les jeux et les sports où le hasard et la chance sont plus importants que l'habileté en décidant du gagnant, comme les dés ou les courses de chevaux.

2A. Combien de fois participez-vous actuellement dans les activités physiques qui sont mieux décrites par une ou plusieurs des catégories suivantes: (quand elles sont d'actualité). Indiquez une boîte par rang.

	au moins une fois par semaine	une ou deux fois par mois	moins souvent ou jamais	
a) L'ACTIVITE PHYSIQUE COMME UNE EXPERIENCE SOCIALE	—	—	—	7
b) L'ACTIVITE PHYSIQUE POUR LA SANTE ET LA FORME	—	—	—	8
c) L'ACTIVITE PHYSIQUE COMME UN FRISSON MAIS ENTRAÎ- NANT UN CERTAIN RISQUE	—	—	—	9
d) L'ACTIVITE PHYSIQUE COMME LA BEAUTE DU MOUVEMENT HUMAIN	—	—	—	10
e) L'ACTIVITE PHYSIQUE POUR LA LIBERATION DE LA TENSION	—	—	—	11
f) L'ACTIVITE PHYSIQUE COMME L'ENTRAÎNEMENT PROLONGÉ ET ARDENT	—	—	—	12
g) L'ACTIVITE PHYSIQUE COMME JEUX DE CHANCE	—	—	—	13

2B. Maintenant, pensez à vos meilleurs amis, en moyenne, combien de fois ont-ils vraiment pris part aux activités qui suivent? (lorsque ceux-ci étaient d'actualité). Indiquez une boîte en chaque rang.

	au moins une fois par semaine	une ou deux fois par mois	moins souvent ou jamais	
a) L'ACTIVITE PHYSIQUE COMME UNE EXPERIENCE SOCIALE	—	—	—	14
b) L'ACTIVITE PHYSIQUE POUR LA SANTE ET LA FORME	—	—	—	15
c) L'ACTIVITE PHYSIQUE COMME UN FRISSON MAIS ENTRAÎ- NANT UN CERTAIN RISQUE	—	—	—	16
d) L'ACTIVITE PHYSIQUE COMME LA BEAUTE DU MOUVEMENT HUMAIN	—	—	—	17
e) L'ACTIVITE PHYSIQUE POUR LA LIBERATION DE LA TENSION	—	—	—	18
f) L'ACTIVITE PHYSIQUE COMME L'ENTRAÎNEMENT PROLONGE ET ARDENT	—	—	—	19
g) L'ACTIVITE PHYSIQUE COMME JEUX DE CHANCE	—	—	—	20

3. Combien de fois regardez-vous chacun des genres d'activité physique suivants à la télévision?

	au moins une fois par semaine	une ou deux fois par mois	moins souvent ou jamais	
a) les programmes de dance pour adolescents.	—	—	—	21
b) les programmes d'exercice et de santé physique	—	—	—	22
c) les évènements spéciaux du sport montrant les sports dangereux et saisissants	—	—	—	23

	au moins une fois par semaine	une ou deux fois par mois	moins souvent ou jamais	
d) les programmes montrant la beauté des mouvements humains (la gymnastique, la plongée fantaisiste..)	—	—	—	24
e) les sports de collège ou professionnels	—	—	—	25
4. Combien de fois <u>lisez-vous</u> la page des sports et des activités physiques dans le <u>journal</u> ?	—	—	—	26
5. Combien de fois <u>lisez-vous</u> les colonnes des sports et d'activité physique dans les <u>revues</u> ou dans les <u>livres</u> ?	—	—	—	27
6. De combien de clubs ou orga- nisations (en dehors de l'é- cole) qui encouragent les sports ou l'activité physique <u>faites-vous part</u> ?	une ou plus	une	jamais	28
7. Y a -t-il une télévision dans votre maison?	—	—	—	29

Lisez soigneusement les douze questions suivantes et indiquez votre préférence. Les jeux donnés entre parenthèses () sont seulement deux exemples des jeux de cette catégorie. Vous n'indiquez pas une préférence pour ce jeu mais pour cette espèce de jeu.

1. Combien de plaisir vous rendent-ils les jeux de l'habileté physique (comme la natation et la gymnastique) où vous devez vous servir de l'habileté et de la force afin de bien réussir?

beaucoup	assez	indécis	pas beaucoup	nul.
==	==	==	==	==

2. Quand vous étiez dans l'école élémentaire combien avez-vous aimé les jeux de l'habileté physique (comme la natation et la gymnastique) où vous devriez être vite en plus de coordonné afin de bien réussir.

beaucoup	assez	indécis	pas beaucoup	nul
==	==	==	==	==

3. Quand vous étiez dans le grade sept, huit ou neuf combien de fois jouiez-vous aux jeux de l'habileté physique (comme la natation et la gymnastique) où, afin de bien réussir vous devez être agressif et vous bien entraîner.

très souvent	souvent	parfois	rarement	jamais
==	==	==	==	==

4. Si vous aviez l'habileté de jouer n'importe quel jeu de l'habileté physique - les jeux (comme la natation et la gymnastique) où afin de gagner il faut être bien coordonné et fort, combien aimeriez-vous jouer ces jeux?

beaucoup	assez	indécis	pas beaucoup	pas du tout
==	==	==	==	==

5. Combien de plaisir vous rendent-ils les jeux de la stratégie où vous devez duper ou mettre en défaut votre adversaire?

beaucoup	assez	indécis	pas beaucoup	pas du tout
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

6. Quand vous étiez dans l'école élémentaire combien avez-vous aimé les jeux de la stratégie (comme le jeu de dames et les échecs) où vous deviez choisir entre plusieurs directions de procéder et duper votre adversaire afin de gagner.

beaucoup	assez	indécis	pas beaucoup	pas du tout
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

7. Quand vous étiez dans le grade sept, huit ou neuf, combien de fois avez-vous joué aux jeux de stratégie (comme le jeu de dames et les échecs) où vous ne devez pas être chanceux ou fort mais seulement capable de duper votre adversaire afin de gagner.

très souvent	souvent	parfois	rarement	jamais
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

8. Si vous aviez l'habileté, combien aimeriez-vous jouer les jeux de stratégie (comme le jeu de dames et les échecs) où, afin de gagner il faut faire des décisions adroites et duper votre adversaire.

beaucoup	assez	indécis	pas beaucoup	pas du tout
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

9. Combien de plaisir vous rendent-ils les jeux de chance, les jeux (comme le Bingo et le jeux de dés) où la fin est déterminée par la bonne chance?

beaucoup	assez	indécis	pas beaucoup	pas du tout
=====	=====	=====	=====	=====

10. Quand vous étiez à l'école élémentaire combien avez-vous aimé les jeux de chance (comme le Bingo et le jeux de dés) où le résultat du jeu était inconnu jusqu'à la fin car la chance jouait un si grand rôle.

beaucoup	assez	neutre	pas beaucoup	pas du tout
=====	=====	=====	=====	=====

11. Quand vous étiez dans le grade sept, huit ou neuf combien de fois avez-vous joué les jeux de chance (comme le Bingo et le jeux de dés) où le joueur ne doit pas être fort, vite ou puissant mais seulement chanceux.

très souvent	souvent	parfois	rarement	jamais
=====	=====	=====	=====	=====

12. Si vous saviez comment jouer n'importe quel jeu de chance, les jeux (comme le Bingo et le jeux de dés) où il y a un élément du destin et de la chance qui détermine qui gagne, combien aimeriez-vous les jouer?

beaucoup	assez	indécis	pas beaucoup	pas du tout
=====	=====	=====	=====	=====

NAME

Last

First

Middle

AGE

Years

YEAR or GRADE

☐ Male

☐ Female

DATE

Day

Month

Year

FACULTY or SCHOOL

Indicate response by placing a mark between the guidelines as shown in the example. Use HB pencil. Don't make marks longer than guidelines.

Example

I. D. NUMBER

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Francais

English

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CAUTION - AVOID PLACING ANY MARKS AMONG THE BLACK TIMING LINES

OVERPRINT ANSWER SHEET

APPENDIX B
VALIDATION DATA

The English form of Kenyon's G.I.N. and B.A.T. inventories has been proven valid and reliable (Kenyon, 1968). For the purposes of this study it was necessary to use a French form of these questionnaires plus the J.G. questionnaire. The validity of the French forms of these questionnaires had to be proven.

Ten bilingual subjects drawn from the test area were given both English and French forms of the questionnaires. Five were given the English forms first and five were given the French forms first. The time lapse between the two testing sessions for each subject varied from thirty minutes to two days.

The translation of the B.A.T. inventory posed two major problems. The first concern was the eight key word pairings located at opposite ends of the Likert scale. Responses to each separate pair of key words, on all seven subdomains, were totalled for each of the five points on the Likert scale, for the French form of the questionnaire. The same was done for the English form and a simple correlation was run between the French and English results. The results were as follows:

Word Pairings Translation Validity Test							Simple Correlation
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
Good Bad)	French	37	18	11	3	1	0.9586
	English	43	12	7	4	3	
Worthwhile Worthless)	French	37	18	11	1	3	0.9845
	English	38	17	7	3	5	
Pleasant Unpleasant)	French	20	29	11	5	5	0.7423
	English	26	18	18	5	3	
Sweet Sour)	French	7	19	35	7	2	0.9772
	English	7	14	40	8	1	

Nice	)	French	14	22	32	2	0	0.9923
Awful		English	16	21	27	4	2	
Happy	)	French	16	31	17	3	3	0.9750
Sad		English	15	27	20	5	2	
Clean	)	French	39	9	21	1	0	0.9581
Dirty		English	37	16	15	2	0	
Relaxed	)	French	13	22	9	12	14	0.6746
Tense		English	17	17	12	11	13	

The second concern was the validity of the translation of the seven subdomain concepts contained in the box preceding the word pairings. All results were totalled for each individual subdomain for all five points on the Likert scale for both French and English forms of the B.A.T. inventory. A simple correlation was run between the results from the English form of the questionnaire and results from the French form. The results were as follows:

Subdomain Translation Validity Test

		Positive	Neutral		Negative		Simple
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Correlation
Social Experience	French	34	25	17	2	2	0.9810
	English	38	21	20	1	0	
Health and Fitness	French	37	21	17	3	2	0.9657
	English	35	17	23	3	2	
Vertigo	French	23	25	20	7	5	0.7508
	English	18	29	24	6	3	
Aesthetic	French	37	33	8	1	1	0.8208
	English	47	15	14	4	0	
Catharsis	French	29	26	18	4	3	0.9734
	English	37	25	15	2	1	
Ascetic	French	12	19	31	9	9	0.4135
	English	16	21	16	15	12	
Chance	French	11	19	34	8	8	0.9373
	English	8	14	35	12	11	

The G.I.N. inventory is of the general information nature and the validity of the translation is not under any question. Most portions of the G.I.N. inventory concern the seven subdomains of physical activity which were validated for the B.A.T. inventory.

Responses on the French form of the Jensen-Glassford questionnaire were totalled for each of the three game categories for each of the five points on the Likert scale. A similar operation was performed for the English form of the inventory and a simple correlation was run between the French totals and the English totals. The results were as follows:

Game Preference: Translation Validity Test

		Positive		Neutral		Negative	Simple
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Correlation
Physical Skill	French	32	6	2	0	0	0.9993
	English	33	5	2	0	0	
Strategy	French	7	12	11	7	3	0.5462
	English	10	6	13	8	3	
Chance	French	2	13	7	16	2	0.9223
	English	3	13	10	12	2	

APPENDIX C
CORRESPONDENCE



January 14, 1970

Mr. Roy Mallette
Principal, KLCUI
Kirkland Lake, Ontario

Dear Sir:

The Faculty of Physical Education at the University of Alberta is proposing to conduct a study of the attitudes toward and interests in physical activity as held by secondary school students in Northern Ontario.

The study involves the administration of a forty minute questionnaire to grade 10 and 12 pupils. We would like to select a random sample of students, based on enrollment in these two grades and to administer the questionnaires on a pre-arranged schedule at the convenience of participating schools, in the month of May, 1970. Toward this end we would ask your permission to include your school as part of our sample for this study.

The questionnaire to be used is one developed by Dr. Gerald Kenyon, presently at the University of Wisconsin and has been given to pupils in Great Britain, Australia and the United States and other parts of Canada. All results of the study will, of course, be referred back to the schools concerned. The questionnaire will provide:

1. A basic insight into the attitudes which are currently held by students.
2. Information as to the relationship between student interests and attitudes and the physical activity program in the schools.
3. The teacher with information as to possible redirection of planning in the physical education program.

Since one of the investigators was a former high school physical education teacher and from the Rouyn-Noranda area, we are particularly interested in evaluating attitudes towards physical activity in the area of Canada.

We believe that the test can be administered with a minimum of disturbance to your regular program and we hope that the information which can be provided will be meaningful to students, physical education teachers and administrators alike.

Thank you very much for your cooperation and consideration.

Sincerely,

R.G. Glassford

P. Jensen

The Collegiate and Vocational Institute

Kirkland Lake, Ontario

G. E. HUNT, B.A.
VICE-PRINCIPAL



H. P. WATTIE, B.A., M.ED.
VICE-PRINCIPAL

R. A. MALLETTE, B.A.
PRINCIPAL

March 5, 1970.

Mr. R. G. Glassford,
Faculty of Physical Education,
The University of Alberta,
Edmonton 7, Canada.

Dear Sir:

With reference to your letter of January 14, we are indeed interested in your proposed study and would appreciate receiving further information on it.

Would you please address this to me, Doug Cooper, Head of Guidance.

I thank you.

Yours truly,



February 18, 1970

Cher Michel,

Cette lettre a pour but de nous renseigner un peu plus clairement que j'ai pu le faire à Noranda d'une étude que je voudrais entreprendre dans une école de votre région.

L'étude comprend l'administration d'un questionnaire de quarante minutes aux élèves des niveaux dix et douze. Nous voudrions choisir au hasard un échantillon d'élèves, d'après les inscriptions dans ces deux grades et donner le questionnaire d'après une schedule arrangée d'avance au gré des écoles qui participeront au mois de mai 1970.

Le questionnaire dont on se servira a été préparé par le Dr. Gerald Kenyon qui est présentement à l'Université du Wisconsin et a été donné déjà à des étudiants en grande Bretagne, Australie les États-Unis et d'autres parties du Canada. Tous les résultats de l'étude seront bien entendu remis aux écoles concernés. Le questionnaire fournira les renseignements suivants:

1. Un aperçu de base quant aux attitudes présentes des étudiants.

2. De l'information quant aux relations entre les intérêts et les attitudes et le programme de culture physique dans les écoles.

3. Ceci fournira à l'instituteur de l'information quant à la nouvelle direction de planification possible en culture physique.

J'aurai l'aide du professeur Gerald Glassford dans cette enquête. L'étude a l'appui entier de la Faculté d'Education physique à l'Université de l'Alberta. Leo Provencher des C.E.G.E.P.

a aussi montré un intérêt dans cette étude, alors je écrirai lui donnant les renseignements que je vous ai donnés.

Je vous ai aussi mentionné que j'espérais donner le même questionnaire aux écoles anglaises du nord de l'Ontario afin que nous puissions comparer les attitudes des élèves francophones et anglophones. J'espère tester 250 étudiants environ dans chacune des écoles.

Croyez - vous que ce serait une bonne idée d'établir des contacts avec les principaux des écoles La Sarre et Rouyn?

J'espère que je ne vous occasionne pas trop de difficultés. Je continuerai à vous écrire pour que vous puissiez arranger des dates qui vous conviendront. Veuillez vous sentir libre de m'écrire et de poser n'importe quelle question que vous pourriez avoir au sujet du questionnaire, de son administration, etc.

Je vous remercie de votre aide et de votre intérêt.

Votre tout dévoué,

Peter Jensen

PJ:ir



18 February 197

Cher Léo,

Ci-inclus, une copie de la lettre que j'ai envoyée à M. Dupuis au sujet d'une étude que je voudrais entreprendre dans votre école. J'espère qu'elle vous donnera une idée de ce que j'ai essayé de vous expliquer en trois minutes à Noël.

J'aimerais me servir d'environ 200-250 élèves de niveaux dix, onze et douze de votre école. Nous choisirions les étudiants au hasard des listes de classes ou des classes entières, selon votre goût.

Si vous avez des questions ou des suggestions prière de m'écrire, à l'adresse ci-haut mentionnée. Merci de votre aide et de votre intérêt.

Votre tout dévoué

Peter Jensen

P.S. Croyez-vous qu'il serait possible de donner le questionnaire à tous les étudiants en même temps? Cela aiderait à couper court au temps.

LA COMMISSION SCOLAIRE
REGIONALE DU CUIVRE
ADMINISTRATION
PÉDAGOGIQUE
DIRECTION
DES SERVICES
DE L'ENSEIGNEMENT

Rouyn, le 25 février 1970.

M. Peter Jensen,
Université d'Alberta,
Faculté d'Education physique,
Edmonton 7,
Alberta.

Bonjour Peter,

Pour faire suite à ta lettre du
18 février, il nous fera plaisir de passer
les tests d'éducation physique dans quel-
ques classes du niveau secondaire.

Nous pourrions organiser un horaire
de travail au mois de mai.

Sois assuré de notre collaboration
entière.

Bien à toi,



March 3, 1970

Dr. Brian Sutton-Smith
Psychology Department
Teachers' College
Columbia University
New York 10027

Dear Sir:

Gerry Glassford, with whom you have corresponded on occasion, and myself, are about to undertake a study of the game preference of French Canadian and English Canadian secondary school students. The test area is located in the northern portion of Quebec around Rouyn-Noranda and in the Kirkland Lake area of northern Ontario.

Our biggest concern is the development of a questionnaire, of adequate validity and reliability, to determine the game preference of the two groups. Have you, as yet, developed such a questionnaire? Do you have any suggestions or information we would find useful? Having been raised in a French Canadian area, I have ample reason to believe that your conflict enculturation theory will indeed be valid cross culturally between these two sub-cultures.

I would also appreciate it if you might inform me as to where I might obtain your thesis on microfilm.

I realize you are an extremely busy man and I thank you for your effort. I will, of course, supply any information and results you wish to have on our study.

Yours enculturation,

Peter Jensen

PJ/bm

TEACHERS COLLEGE COLUMBIA UNIVERSITY

NEW YORK, NEW YORK 10027

March 22, 70

Dear Peter,

I think you will have to develop your own scale suitable to local dialect, expression and terms. I enclose a number of offprints etc to show you how we went about it and what happened over a period of years.

My thesis is on microfilm at Ball State Teachers College, Muncie Indiana. I'm not sure that it will be so useful to you; its a vast 900 page conglomerate of my beginnings. However, this summer the essence of that and everything since is going into a Pelican book.

Yours upculturation



March 3, 1970

Dr. Kenyon
Physical Education Department
2000 Observatory Drive
University of Wisconsin
MADISON, Wisconsin 53706

Dear Dr. Kenyon:

Gerry Glassford spoke to you briefly, at the Sport Science Convention in Calgary, concerning a proposed study involving the use of your "Attitudes Towards Physical Activity" questionnaire. We hope to conduct this study in Late April in French and English schools in northwestern Quebec and northern Ontario.

I understand that your questionnaire has changed somewhat since it was used in two studies here in 1967. Do you have any information and/or suggestions as to the questionnaire and its administration? We were considering changing it to a Likehart scale. Will this drastically affect validity? Where may we obtain results from studies done using your questionnaire in Great Britain, Australia and the United States?

I realize you are an extremely busy man and I thank you for your time. We will, of course, make our results and material available to you if you so desire.

Yours truly,

Peter Jensen

PJ/bm

THE UNIVERSITY OF WISCONSIN

MADISON, WISCONSIN 53706

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DEPARTMENT OF PHYSICAL EDUCATION-MEN
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April 11, 1970

Mr. Peter Jensen
Faculty of Physical Education
The University of Alberta
Edmonton 7, Canada

Dear Mr. Jensen:

My apologies for not replying to your letter of March 3rd earlier.

The attitude inventories used in our cross-national study to which you referred, basically remain the same. These are given in the report of the afore mentioned project. You will recall that these were semantic differential scales. You may be interested to know, in view of your interest in the Likert approach, that our semantic differential scales were preceeded by the Likert scales. I am enclosing two reprints and the questionnaires. In fact, we have more information on the validity and reliability of the Likert scales than we do on the semantic differential approach.

I hope the above and the enclosures will be of some help to you. I would very much be interested in receiving a summary of your results. I wish you good luck in your efforts.

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